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THESIS

ORGANIZATION COMMITMENT AND PERSONNEL RETENTION IN THE MILITARY HEALTH CARE SYSTEM

by

Michael LeeRoy Feris
Vernon Melvin Peters

December 1976

Thesis Advisor: C. K. Eoyang

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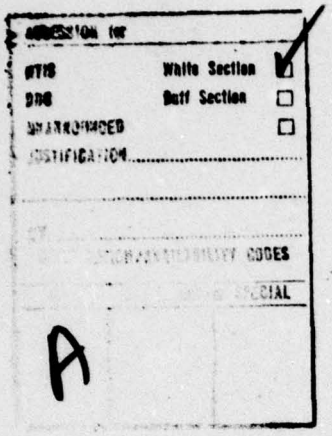
Profiles of the four categories of commitment are developed which provide insight into which individuals can more likely be retained in service. The profiles suggest areas in which organizations can move to improve upon retention and motivation. It is concluded that the concept of organization commitment discloses a broader range of effective policy choices than models presently available.



ORGANIZATION COMMITMENT AND PERSONNEL RETENTION IN THE MILITARY HEALTH CARE SYSTEM

by

Michael LeeRoy Feris
Lieutenant, Nurse Corps, United States Navy
B. S., University of Washington, 1969

Vernon Melvin Peters
Lieutenant, Medical Service Corps, United States Navy
B. S., George Washington University, 1975

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requirements for the degree of

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December 1976

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Authors: Michael L. Feris

Vernon M. Peters

Approved by: Carson K. Eoyang
Thesis Advisor

William Haga
Second Reader

Chairman, Department of Administrative Science

David B. Schrady
Dean of Information and Policy Sciences

ABSTRACT

The question of how sufficient numbers of military health care providers can be maintained to meet an increasing demand on their services in the face of the all-volunteer service provides the focus for study. This thesis addresses the personnel retention issue through a model of organization commitment developed from a synthesis of research findings in related areas of organization psychology. The model is tested upon an existing pool of survey data drawn from the three military medical services.

Discriminant analysis is employed to segregate the sample into degrees of commitment to determine the most successful predictors of retention and motivation. It was found that an individual's length of service and the perception of the command's concern for human resources were consistently more powerful predictors than the concern for salary, status, and educational opportunities.

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It is concluded that the concept of organization commitment discloses a broader range of effective policy choices than models presently available.

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With the return of the United States Armed Forces to an all-volunteer force, the issues of personnel retention and turnover have become of paramount importance to those defense policy-makers responsible for raising and maintaining the military services. For those responsible for the military health care delivery system, the issues have become acute. A shortage of skilled personnel--especially physicians--serving in the military medical departments could encumber force readiness, constrain the options available in meeting contingencies and affect personnel morale through the abridgment of a presumably attractive benefit of service.

The historically high turnover rate among military physicians and other health professionals has provided an impetus for a reexamination of the present structure of the military health care system. Studies to date have generally focused on two areas: (1) determining what might increase the attractiveness of military health care as an employment opportunity and a career alternative (Braunstein, 1974; Devine, 1973; The President's Commission, 1970; Baker, 1969; and Dorman, 1969); and (2) determining how to increase the efficiency and effectiveness of the military health care delivery system in view of scarce resources (Giauque, Derr, Boyang and Harris, 1976; The Military Health Care Study, 1975; Health Personnel All-Volunteer Task Force Report, 1973).

In response to the threat posed by the decision to end military conscription, the military services initiated a

number of programs aimed at improving the recruiting and retention of health professionals and creating working conditions which improve their efficiency and enlarge their professional challenge. Principally, these have involved increasing the number of scholarships in the health professions in return for a specified number of years of active service; establishment of the Uniformed Services University of the Health Sciences to increase the national supply of health professionals; the addition of a variable incentive pay for physicians and dentists in order to narrow the disparity with their civilian counterparts; and acceleration of the medical facility construction or modernization program to update outmoded facilities.

Paralleling innovations in the civilian sector aimed at rationalizing the provision of medical care, the services also established programs to integrate the emerging intermediate-level health care provider roles of physician's assistant and nurse practitioner into the traditional health care team. These roles and their functions have been thoroughly described elsewhere (Giauque, et.al., 1976).

One deficiency in the studies to date has been the focus on quantitative aspects of retention and turnover while setting aside the qualitative dimension of personal commitment. If the services are concerned about maintaining a high-caliber health care system made up of highly motivated personnel providing all levels of care, the effect of organization policy and practices on an individual's willingness to devote his best efforts to the mission and tasks of the organization must also be considered. This is important regardless of the service member's decision on whether or not to make the military a career.

Since the military medical departments are in open competition with the civilian sector for medical manpower,

the Armed Forces need organizations which can attract and retain sufficient numbers of medical personnel at minimum cost while meeting the overall objectives of the health care system. The design, implementation, or modification of programs by the military medical departments to do this in the all-volunteer era requires an understanding of those factors which affect an individual's decision on initial or continued participation in, or withdrawal from, military service. The purpose of this study was to identify the relative contribution of certain organization, role-related and personal variables to the development of commitment to a career in military health care.

II. ORGANIZATION COMMITMENT AND JOB RETENTION

A. EMPLOYMENT, RETENTION AND TURNOVER

Because of the costs associated with turnover, employers traditionally have sought to identify and remedy, when possible, the causes for voluntary personnel attrition. Inherent in such an approach is the assumption that turnover can be controlled and, thus, held to some minimum. Researchers have often dealt with this proposition by using employee turnover as a criterion measure in studying the consequences of personnel programs or management practices. However, Flowers and Hughes (1973) have alternatively suggested that a consideration of at least equal importance in controlling turnover is determining why people stay: "If a company wants to keep its employees, then it should also study the reasons for retention and continuation, and work to reinforce these"(p.49).

1. The Decision to Participate

Motivational theorists such as Maslow, McClelland and Herzberg have argued that in addition to economic needs, jobs also function to meet psychic and social needs. Such needs include self-actualization, self-esteem, autonomy, achievement, power, affiliation, and security. Within the construct of the Barnard-Simon-March "inducements-contributions" theory (March and Simon, 1970), work organizations can secure the participation of employees

through the offering of inducements (pay, recognition, prestige, etc.) which variously satisfy these needs in exchange for the employees' contribution (time, effort, lost opportunities, etc.) to the activities of the organizations. Since it is reasonable to assume that values, motives or preferences differ among individuals, the decision of any given individual to participate in an organization will be a function of the inducements-contribution balance as measured by the individual's personal standards.

Individual differences in attitudes also help to account for the manner in which people select the type of work they will perform. Building on the expectancy model developed by Vroom (1964, 1966), Lawler (1973) noted that for any given individual the basic work-participation decisions of occupation-choice and job-choice are influenced by the attractiveness of the outcomes perceived by the individual as associated with the work and the probable organization setting. However, because people often see little possibility of entering and succeeding in the occupation they perceive as <u>most</u> attractive (occupation-preference), or securing and retaining the job they find <u>most</u> attractive (job-preference), they generally choose an occupation of sufficiently attractive outcomes wherein they perceive a high probability of success. This is in agreement with the position of Super, Starishevsky, Matlin and Jordaan (1963) who view occupation-choice as an attempt by the individual to realize a self-image. Since the range of potential job choices tends to be constrained by the occupation-choice made by an individual, the type of work a person prefers may be more prepotent in the work-participation decision process than a preference for organization setting.

2. The Decision to Continue or Withdraw

Once in a job, employees tend to remain with the organization until some force causes them to leave. March and Simon (1958) attributed this to "habituation". Flowers and Hughes (1973), adopting a concept from the physicial sciences, have described such employee behavior as "inertia." The factors which may affect this "inertia" have been found to consist of a complex set of variables usually involving the individual and his or her relationship with the organization.

In some situations, the work-participation relationship between the individual and the organization is attenuated by external forces. For example, in many occupational fields actual or pseudo apprenticeships exist. During these periods "novices" must acquire the training and experience to become fully employable within their chosen occupation. When this is the case, the decision to quit has often already been made by the individual and anticipated by the organization when an outside position is offered and accepted. The only question that remains for both the employee and the employer is "when?"

Another factor to be considered is that voluntary personnel turnover tends to be mediated by conditions in the general economy. When the economy is in an upswing, new job opportunities arise fostering employee mobility; however, when the economy turns downward, such mobility is dampened by the threat of unemployment. The constraining effect of the latter condition may have serious implications for the employing organization: as pointed out by Lawler (1973), "the fact that a person shows up for work tells us little about what he will do once he is there" (p.88).

Consequently, Flowers and Hughes have argued that the best interests of the organization are served by the cultivation of a relationship where employees *want to* stay rather than *have to* stay.

The first rudimentary indication that the organization might be able to build such a relationship with its employees emerged from the studies that Mayo (1933) and Roethlisberger and Dickson (1939) carried out at the Hawthorne works of the Western Electric Company. These researchers, following up on work begun in 1924 by efficiency experts searching for an optimal combination of working conditions to stimulate production activity, found that the most significant factors affecting organizational productivity involved human aspects rather than physicial or pecuniary conditions of work. Specifically, they noted that the interpersonal relationships that developed among employees on the job and management's interest in both the individual and the work group positively affected employee attitudes toward the work and satisfied the previously unmet needs for affiliation, competence and achievement (Hersey and Blanchard, 1972).

Subsequently, in an attempt to consolidate findings and provide direction to a growing body of research into the behavioral dynamics of the work environment, Brayfield and Crockett (1955) focused on the relationship of employee attitudes and performance. Finding little association between employee job satisfaction and productivity, but a significant though complex relationship between employee dissatisfaction and turnover, they suggested that research focus on: (1) the causes, correlates and consequences of job satisfaction, *per se*, and (2) the differential effect of particular kinds of management practices upon the attitudes and performances of workers with different motives, aspirations and expectations (p. 421).

Following publication of the Brayfield and Crockett article, a profusion of research into the nature and causes of job satisfaction and the consequences of organization practices yielded a theoretical framework in which the work-participation decision process has been studied. March and Simon (1970) postulated that the inducements-contributions balance is a function of two major components: (1) the perceived desirability of leaving the organization, and (2) the perceived ease of movement from the organization. On the basis of substantial evidence already in existence, they believed that the primary determinant of the first component was the level of employee satisfaction with a wide range of relatively distinct aspects of the job. The second component primarily involved the employee's perception of the external employment environment, i.e., what, if any, opportunities existed elsewhere in which a greater return could be realized in view of the alternatives foregone. March and Simon noted, however, that activation of the second component was often linked directly to the first:

> The greater the individual's satisfaction with his job, the less the propensity to search for alternative jobs; in general, there will be a critical level of satisfaction above which search is quite restricted and below which search is quite extensive...[Therefore], dissatisfaction makes movement more desirable and also (by stimulating search) makes it appear more feasible (p.121).

Much of the work on retention and turnover has centered on the importance of job satisfaction factors within the intrinsic-extrinsic dichotomy of Herzberg's Motivation-Hygiene Theory. Atchison and Lefferts (1972), asserted that the extrinsic rewards over which the organization has the greatest control most clearly affect the perceived equity of the inducements-contributions balance, and demonstrated that these factors were better predictors of turnover than were intrinsic factors. However, Karp and Nickson (1973), drawing on a sample of the black working poor (as opposed to Air Force officers in the

Atchison and Leffert sample) found that the extrinsic factors, while significantly related to turnover, had slightly less impact than did deprivation of the intrinsic factors. These conflicting results are probably the result of methods and sampling differences. Based on a review of the literature, Nealey (1970) found that the intrinsic factors generally accounted for more of the variance in job satisfaction than did the extrinsic factors.

A variety of other potentially useful predictors such as personality variables and organization structure have been tested and reviewed without any consistent results (Vroom, 1964; Schuh, 1967). Farris (1971) hypothesized and tested a predictive model of turnover which took into account various aspects of the organizational environment. Based on a multi-organizational sample of employed scientists and engineers, he found that turnover was most strongly associated with: (1) the feeling that it would help a person's career, (2) low organizational provisions for rewarding performance, and (3) lower age and technical maturity. However, because many of Farris' predictors were effective in one organization but not in others, Kraut (1975) has suggested that the complexities of organizational and individual variables do not permit the development of a general model predicting turnover. In turn, Kraut argued and demonstrated in a longitudinal study that the best estimate of turnover can come from the employee's direct estimate of his future tenure.

Proceeding from the assumption that employee behavior is largely determined by the motive strength of certain outcomes, Vroom (1970) abstracted from the literature four classes of variables that appeared to determine a person's attitude toward his role in an organization and the probability that he would leave it. These are (p. 102):

1. The amounts of particular classes of outcomes such as pay, status, acceptance and influence, attained by the person as a consequence of his occupancy of that role.

2. The strength of a person's desire or aversion for outcomes in these classes.

3. The amounts of these outcomes believed by the person to be received by comparable others.

4. The amounts of these outcomes which the person expected to receive or has received at earlier points in time.

In a more recent review of the literature, Porter and Steers (1973) identified four general categories of levels within an organization in which factors affecting the employee's decision to continue or withdraw could be found: (1) organization-wide (pay and promotion policies, etc.), (2) the employee's immediate work group, (3) the content of the job, and (4) the person himself. While reporting that substantial evidence continued to support the contention that overall satisfaction is an important determinant of the individual's participation decision, they pointed to the importance of the concept of met expectations in the decision process:

> ...each individual is seen as bringing to the employment situation his own unique set of expectations for his job...Whatever the composition of the individual's expectation set, it is important that those factors be substantially met if the employee is to feel it is worthwhile to remain with the organization (p. 170).

The complexity of the work-participation decision process is borne out by the only moderate, but statistically significant, correlations (usually less than .40) consistently reported between employee dissatisfaction and turnover (Locke, 1976). If there is some critical level within the satisfaction continuum (as noted previously in regard to the hypotheses of March and Simon) and other work attitudes within which an employee becomes inclined to

withdraw but yet does not leave the organization, it becomes important to consider the possibility of an intervening variable as mediating the employee's work-participation decision. One such variable may be organizational commitment.

B. ORGANIZATION COMMITMENT

Discussions in the literature of individuals' behavior in organizations often include questions about group "loyalty," "identification" with the organization, and "commitment." Seldom are these concepts precisely described. They are useful nonetheless in discussing the fact that some individuals remain in an occupation or organization while others do not. The term commitment is prevalent in the literature on behavior in organizations and most notably so in that dealing with labor turnover and retention.

Becker (1960) noted that a broad spectrum of uses and meanings is attached to commitment. In attempting to explain commitment in a sociological sense, Becker proposed that the more one has invested in an organization and thus could lose by leaving it, the greater the personal commitment to the organization. This is essentially a social psychological process involving structural elements. These structural elements promote the making of investments or side bets which have the effect of holding an individual to a consistent line of activity. The bets are placed on the "side" in the sense that they are secondary to the primary exchange of labor for wages and that these bets represent something of value previously not directly related to the activity in question.

Becker's notion of side bets thus adds the dimension of time to the exchange principle of the Barnard-Simon-March inducements-contributions model of participation (Hrebiniak and Alutto, 1972). If an employee's inclination to remain with or leave an organization is predicated on the rewards-costs balance perceived to exist at any particular moment, the accrual of intangible inducements that reach maturity and have potential pay-off only with tenure may tend to shift the balance in favor of remaining. Accordingly, side bets may be viewed as mitigating both the perceived desirability of leaving the organization and the perceived ease of movement from the organization.

The side bet framework is useful in explaining a range of common situations. The individual who is reluctant to leave the military prior to retirement has side bets invested in the pension which would be lost were he to opt for civilian life. Progression through the ranks and the taking on of greater managerial responsibility act to place side bets in the sense that if the individual elects to leave the military, he stands to loose a niche in a familiar hierarchy.

One major shortcoming of Becker's explanation is that it fails to differentiate between individuals who are committed in terms of being willing to give of themselves in pursuit of organization goals and those individuals who are so constrained by their side bets that the costs of other alternatives are prohibitive. The former group will be actively committed and the latter group passively committed. From the standpoint of the Becker theory, both types of individuals exhibit commitment, but the qualitative differences may significantly influence organization outcomes beyond mere retention. It can be easily imagined that the passively committed would exhibit little enthusiasm for organization objectives. Indeed, if one is functioning

with not much more than a posture of being resigned to the inevitable, a significant contribution toward productivity and efficiency seems remote.

The difference between active commitment and passive commitment is psychological. However, Ritzer and Trice (1969) contend that the psychological phenomenon of organization commitment does not occur primarily as a result of the influence of structural elements as Becker would have it. While they do acknowledge the influence of side bets, these authors hold that an individual first commits himself to an occupation in an attempt to make his work life meaningful. Then to the extent that the occupation is unable to fulfill the needs of the individual, commitment to the organization develops. Organization commitment is seen as being inversely related to occupation commitment. In this line of reasoning, factors such as those indicated by Becker serve, over time, to strengthen the commitment.

In support of this argument, Sheldon (1971) found that for men in professional occupations, social involvements with the organization increased the commitment to the organization while reinforcing the effect of investments. These social involvements tended to lessen the negative effects of professional commitment. Moreover, she observed that professionals with high commitment to the profession tended not to be commited to the organization. She states:

> The profession thus increasingly provides a reference group that competes for loyalty with the organization. The organization is hard pressed to retain the loyalty of its professionally committed personnel, particularly those with medium length of service. Promotion to higher position does not counteract the effects of increased professional commitment for all personnel (p. 149).

The implication would seem to be that the influence of professional commitment on organization commitment is curvilinear over time with social involvements acting as a moderating variable.

Similarly, the descriptions of cosmopolitan and local role orientations (Gouldner, 1957) would seem to substantiate Sheldon's observation. Gouldner summarized cosmopolitans as follows: "Those lower on loyalty to the employing organization, higher on commitment to their specialized role skills, and more likely to use an outer reference group orientation." Locals are described as possessing opposite characteristics.

One major study tested the cosmopolitan--local dichotomy among a group of professional nurses (Bennis, Berkowitz, Affinito, and Malone, 1958) and obtained results exactly opposite to that expected from the theory. This fact can be explained by the preconceptions regarding the nursing profession held by the researchers and their a priori application of Gouldner's classifications. Their error was in assuming that the profession of nursing follows the more familiar model of the medical profession in which cosmopolitan physicians identify quite strongly with a recognized outside reference group such as the American College of Orthopedic Surgeons. In fact, the nursing profession is not so well integrated as a profession that outside reference groups are revelant. To the surprise of the researchers, the cosmopolitan group was found to be those nurses inside the organization who had become part of nursing administration and the locals were those engaged in the delivery of direct patient care. Regardless of whether the researchers fully understood the profession they were studying or how the Gouldner labels were originally applied, a fairly clear dichotomy was found. In effect, the study demonstrates that Gouldner's concept is valid for one of the health professions.

Other variables have been shown to be related positively to the development of organizational commitment. Lee (1971) demonstrated that among professional scientists, commitment

to the organization was a function of a range of complex variables including perceived opportunity for achievement, perceived prestige of the profession, overall relations with management, and prestige within the organization. It was discovered that among those scientists with a low commitment to the organization, there was a greater propensity to leave the organization. High commitment was found to be associated with increased productivity, job satisfaction and increased motivation.

C. THE RELATIONSHIP OF JOB SATISFACTION TO ORGANIZATION COMMITMENT

The existance of a relationship between job satisfaction and organization commitment has been noted above (Lee, 1971). Although the direction of the relationship is unspecified, the inference can be made that job satisfaction tends to strengthen commitment. To substantiate this belief, it is necessary to turn briefly to the literature of job satisfaction.

From the more than 3,300 studies on the subject to date (Locke, 1976), it would appear that job satisfaction has, at a minimum, seven important dimensions. Ronan's summary of the literature (1970) indicates that whether these dimensions are operationally considered a part of an over-all job satisfaction, or are taken as discreet characteristics, they most frequently are classed as (a) the content of the work, actual tasks performed, and control of work; (b) supervision of the direct sort; (c) the organization and its management; (d) opportunities for advancement; (e) pay and other financial benefits; (f) co-workers; and (g) working conditions. Additionally, the complexity of satisfaction suggests that it is related

to both situational and demographic variables.

Job satisfaction as a desirable end in itself has been extensively explored in order to determine its antecedents. Attention has recently turned to viewing satisfaction as a determinant of job performance behaviors (Ronan, 1970; Seashore & Taber, 1975; Locke, 1976). In taking note of this fact, Seashore and Taber observe, "...there is very little theory and empirical data about the consequences of which satisfaction is regarded as a causal antecedent" (p. 358).

Various outcome variables have been linked to job satisfaction. Wernimont (1972) identifies absenteeism, personnel turnover, effort, and productivity among others as outcomes of his model of job satisfaction. Of these variables, only absenteeism and turnover have been consistently related to satisfaction (Locke, 1976; Vroom, 1964). As Locke points out, satisfaction has no direct effect on productivity, and that under certain circumstances, productivity may very well influence satisfaction.

The relationship of satisfaction to personnel turnover is acknowledged by Porter and Steers (1973). They note that of 14 studies, 13 have shown significant negative relationships. One of these studies (Atchison & Lefferts, 1972) demonstrated that among Air Force pilots, Gouldner's distinction significantly influenced the interpretation of the results. Locals were found to be much more likely to remain in the organization than were cosmopolitans. This would suggest that in order to explain adequately personnel retention, job satisfaction, alone is insufficient. Commitment to the organization must also be considered.

In support of this position, research by Flowers and

Hughes (1973) is of interest. Unlike previous studies of satisfaction, Flowers and Hughes took note of those individuals who were dissatisfied with the job but chose, nevertheless, to remain with the organization. This group was found to attribute their staying primarily to family and financial considerations. The parallel to the accrual of side bets committing them to the organization is important here. Flowers and Hughes note further, "These employees are excellent examples of personnel who have not affected the turnover statistics but who have left the company, psychologically, long ago" (p. 56). This group of committed, but dissatisfied, employees describes the passively committed. It may be that the failure to take into account the distinction between passive and active commitment explains the inconsistency of relationships between productivity and job satisfaction noted earlier.

D. STRUCTURE AND ORGANIZATION COMMITMENT

The multiplicity of variables associated with organization commitment has been extensively reviewed by Hrebiniak and Alutto (1972). Their research led to the conclusion that role-related factors were of primary importance in explaining organization commitment. The argument is advanced that role tension and ambiguity as well as uncertainty results in decreased commitment to the work organization by increasing the attractiveness of extraorganization alternatives. They note further that the interactive effects of personal and organization variables are crucial to understanding the complexity of the commitment process. This view would appear wholly consistent with the belief that commitment is structurally related as indicated by Becker, Sheldon, and March and Simon.

1. Organization Structure

The relationship of commitment to structural processes within the organization operates at two levels of analysis. At the organization level, structure encompasses a number of dimensions. These dimensions have been variously categorized to include: structuring of activities, concentration of authority, line control of workflow, and size of supportive component (Pugh, Hickson, Hinings, and Turner, 1968); structuring of role activities, authority system, status system, and configuration of roles in the structure (Payne and Pugh, 1976).

From an analytic point of view, these dimensions capture the essential characteristics of an organization and allow for descriptive comparisons to be made among organizations. These are the factors which determine the framework of the organization to which one becomes committed. These dimensions define limits in terms of the status, authority, and job content which are open to the individual and in turn determine what options for investments and side bets are available. Whether the individual elects to exercise those options is not in question at this point; it is enough to recognize that the nature of the organization is a principal determinant of many of these options.

2. Organization Climate

On a personal level, structure again becomes influential in terms of its perceived impact upon the individual. This perception of what the organization is has been termed, organization climate. Organization climate,

like structure, can be dissected into various components of which the perception of structure is just one aspect. Litwin and Stringer (1968) identified nine components of organization climate including reward, responsibility, risk, warmth, support, standards, conflict, and identity in addition to structure. Schneider and Snyder (1975), in their treatment of the climate concept have stated:

> It is, then, a global impression of what the organization is. The global nature of organizational climate, however, in no way suggests that the concept is unidimensional...each individual perceives or conceptualizes his organization in any number of ways, depending upon the context and the set of information about the organization which is operative for that individual...Further, organizational climate perceptions are descriptive of conditions that exist in the work environment...; the perceptions are not evaluative or affective....[emphasis theirs] (p. 319).

This description points to the possibility that climate perceptions are influenced by the extent to which an individual has access to information about the organization. Porter and Lawler (1965) in a review of literature relevant to structural influences on job attitudes found substantial evidence to support the belief that perceptions of the organization are dependent upon where the individual is in relation to the hierarchy. More recently, Newman (1975) empirically corroborated this fact and suggested that the position occupied by the individual in the organization space provided a particular work environment and set of organization experiences upon which to base his perceptions.

The nature of the relationship of climate to satisfaction has been raised by Johannesson (1973) who takes the position that the two concepts are redundant measures of one variable. Schneider and Snyder argue that climate and satisfaction are both logically and empirically distinct provided that both variables are properly conceptualized and appropriately assessed. Given that organization climate is an individualistic description of existing work conditions,

they view job satisfaction as an evaluation of the work conditions which are filtered through the individual's own set of values, norms and expectations. Litwin and Stringer first postulated the filtration concept, regarding organization climate as a filtration process of structural realities. LaFollette and Sims(1975) carried the Litwin and Stringer notion further by saying that perceptions of the work environment arouse "...motivation which, in turn, causes emergent behavior resulting in various consequences for the organization such as: satisfaction, productivity or performance, and retention or turnover" (p. 259).

Thus the structure of an organization impinges upon the development of commitment from two directions and from two levels of analysis. In the larger sense, the structure of the organization determines the character and configuration of the outcomes available to the employee. At the opposite end, how these outcomes are perceived by the individual relative to his set of beliefs, values, norms and expectations influences whether he will opt to join, remain in, or withdraw from the organization.

E. SUMMARY AND RESEARCH OBJECTIVE

In summary, there is considerable evidence that an individual's decision of how and where to work is mediated by factors other than the basic economic motive alone. Personal values, needs and expectations are believed to impart a significant influence on the work-participation decision. While people may take the "best" job they can get at any particular moment, continuation in the job is subject to its being consistent with one's self-image as well as the nuances of time: people's attitudes change as do an organization's policies and practices.

In view of an assumed causality between organization policy or practice and employee attitude as manifested in job behavior, the relationship has been extensively studied. Most frequently, research has focused on specific aspects--for example, the multiple facets of job satisfaction, or the structural processes which prescribe the organization climate. In general, such research has consistently shown a positive relationship between job satisfaction and retention while the relationship between job satisfaction and performance has remained obscure. Structural processes involving the organization and control of work and the reward system have been found to affect retention through individuals' perceptions of the structure and its compatibility with their values and expectations, and the norms for their roles.

Despite the breadth of research into the psychology of work, job satisfaction, role development, structure of organizations and organization climate, no single work dimension or personal attribute has proven to be powerful enough by itself to explain why some employees stay while others leave the organization. If a general predictive model of employee retention is to be successfully constructed, there first must be some way to organize the numerous factors impinging on the work-participation decision so that their interrelationships can be explored. Organization commitment, although an abstraction, appears to be a logical and appealing variable which serves to organize these factors and mediate their influence.

Fig 1 illustrates a conceptualization of the organizing and mediating role of organization commitment. The arrows highlight relationships which seem most plausible from the available evidence, but do not necessarily imply known causalities. While the personal and organizational variables may largely be measured objectively, their interrelationship

is most often captured subjectively in measures of job satisfaction and organization climate perceptions. In turn, the validity of these relationships is tested against such outcomes as productivity, retention and efficiency. Because of the inconsistency found between the subjective measures and outcomes, viewing organization commitment as a construct having two bipolar dimensions--(1) the decision to remain with the organization, and (2) the motivation to work in support of organization aims--allows for grouping of individuals into four commitment categories: first, a group of highly motivated individuals planning to remain with the organization; second, a group planning to remain but poorly motivated; third, a highly motivated group that plans to leave the organization; and fourth, a group of poorly motivated individuals who intend to leave. Analysis of the variables contributing to organization commitment in terms of these four categories may reveal relationships and interactions previously obscured.

While the model suggests numerous specific propositions regarding the relationships and interactions of personal and organizational attributes with outcomes, this study focused on the construct of organization commitment and the role it plays in the retention of military health care personnel. The central objective of the research described in the following chapters was the identification of the relative contribution certain personal, role-related and organizational variables make to the development of commitment to a career in military health care. The underlying assumptions were that for each role studied, unique relationships exist between the individual and the organization which promote or inhibit the development of organization commitment, and that these relationships are consistent among individuals expressing a similar degree of commitment to the organization .

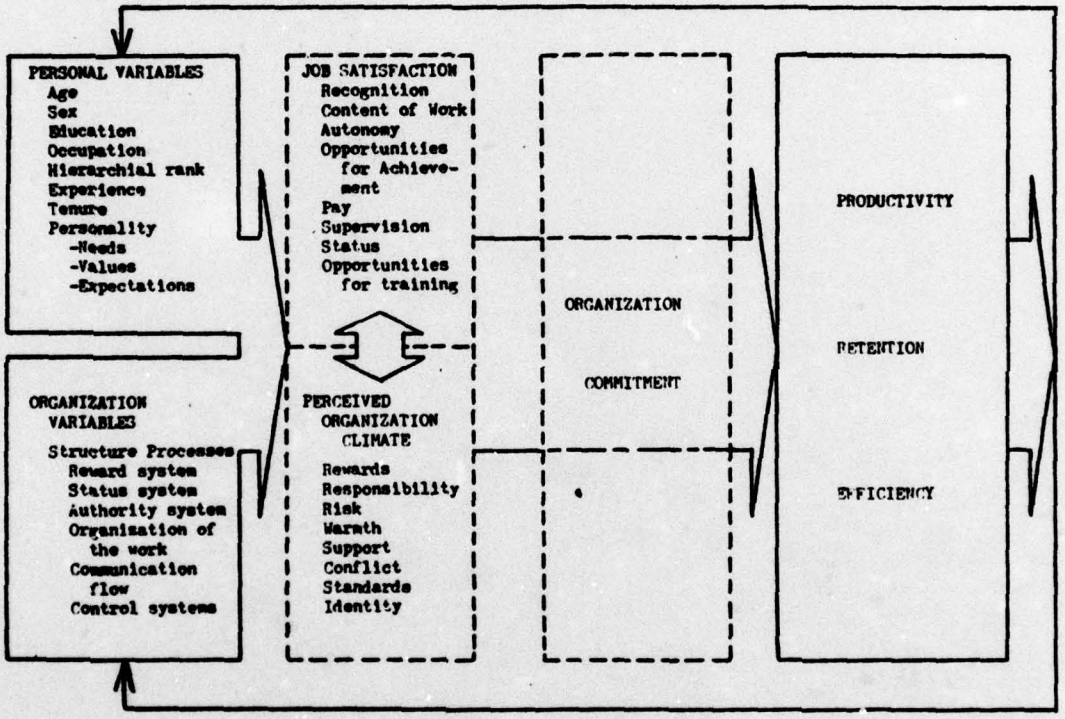

Figure 1 - CONCEPTUAL MODEL OF ORGANIZATION COMMITMENT

III. METHODOLOGY

A. CONDUCT OF THE STUDY

The data used in this study were obtained in conjunction with a Department of Defense sponsored research project on the effective use of all members of the military services' health care teams. The project had come about as a result of interest by Defense officials in an evaluation of programs implemented by the military medical departments in response to the problems posed by the all-volunteer force.

While the appropriate role of the physician's assistant was of special concern, there were concurrent interests in the definition of appropriate roles for all members of the military health care team and the effects of various organization and military policies on these members providing medical support to the armed forces. Following discussions between Mr. David Smith, Director of Manpower Requirements for the Department of Defense, and a number of individuals involved in health care research at the Naval Postgraduate School, Monterey, California, a research strategy was formulated. Four broad questions formed the focal interest of the research (Giauque, Derr, Boyang, and Harris, 1976): (1) how are the medical personnel, especially physician-extenders, being used in terms of tasks performed, organization setting, and type of patients treated; (2) how do these tasks correspond to the training received; (3) what are the effects of various organization conditions (rules, structure, morale, status, etc.) on the optimal use of these

personnel; and (4) what differences exist among the various personnel in terms of current use and potential stemming from their training.

Supported by a research grant from the Office of the Secretary of Defense (Manpower and Reserve Affairs), the principal investigators implemented their research strategy through three self-administered, mail-return questionnaires intended for distinct sets of personnel: (1) the military health care providers (physicians, nurses, nurse practitioners, physician's assistants, and medical corpsmen, etc.); (2) personnel involved in the training of military physician-extenders; and (3) a small group of physicians who would serve to evaluate the relative difficulty of various medical tasks for which performance frequency responses were requested in the first questionnaire. The information gathered in the questionnaire survey approach was augmented through interviews with incumbents of the various roles at several military medical facilities.

The data used in this study were drawn from the questionnaire completed by the various health care providers of the Army, Navy and Air Force. The questionnaire (see Appendix C) called for 151 responses to questions pertaining to the respondent's medical role description, medical task responsibilities, work-related attitudes, descriptions of others in his work-group, career orientation, and certain demographic information.

During early 1976, packets of 25 questionnaires were sent to all primary military medical commands within the continental limits of the United States. In a cover letter, Commanding Officers were familiarized with the objectives of the research project and requested to distribute the questionnaires among the various role incumbents serving at their medical facility for self-administration. However, no

specific guidelines were given to assure any sort of representative sample of the population.

Because of the variations in medical facility size and staffing, generalizing from the results may be subject to limitation. Moreover, due to a substantially larger number of Air Force installations, the number of Air Force personnel in the sample is approximately equal to the combined samples of the Army and Navy. However, a sufficient number of responses were received for each occupational role within each service branch to facilitate analysis both within each service and among services.

B. THE SAMPLE

The returned questionnaires yielded a sample base of 2,595 cases which included 2,334 active duty military medical personnel. The balance of the sample was made up of civil service employees, military personnel not responsible for providing patient care, or questionnaires returned in unusable form, most frequently as a result of missing or incomplete demographic data. The response rate, number of facilities sampled and total number of subjects per service branch were: U.S. Army, 62 percent returned from 37 facilities (N=568); U.S. Navy, 75 percent returned from 29 facilities (N=512); and U.S. Air Force, 60 percent returned from 94 facilities (N=1,254).

The occupational groups included in the present analysis are: physician (MD), nursing supervisor (NS), nurse (N), nurse practitioner (NP), physician's assistant (PA), and medical corpsman (HM). Nursing supervisors were distinguished from nurses in the study due to the functional differences involved in the roles. Nursing supervisors

TABLE 1

Characteristics of Sample by Medical Role by Service Branch

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
U.S. Army						
N	115	53	63	86	36	215
Percent male	99%	28%	22%	17%	94%	69%
Median age in years	31	38	27	28	34	27
Median years served	3	15	6	7	15	6
Range, years service	<1-32	3-29	<1-18	<1-20	5-22	<1-23
Percent professing career intention[a]	27%	85%	40%	50%	83%	52%
U.S. Navy						
N	132	47	45	45	52	191
Percent male	97%	4%	24%	20%	98%	73%
Median age in years	32	43	29	30	32	23
Median years served	3	17	7	7	13	3
Range, years service	<1-32	2-25	2-19	<1-19	5-23	<1-19
Percent professing career intention[a]	30%	94%	62%	60%	71%	33%
U.S. Air Force						
N	316	111	84	168	157	418
Percent male	98%	8%	14%	10%	99%	88%
Median age in years	31	41	32	35	33	28
Median years served	2	16	8	9	14	7
Range, years service	<1-32	<1-23	<1-21	<1-23	5-26	<1-27
Percent professing career intention[a]	29%	86%	56%	74%	73%	57%

[a] Career intention = years of service plus years expecting to stay > 18.

generally perform administrative or managerial tasks rather than direct patient care duties associated with the role of the nurse. The general characteristics of each role sample by service branch considered in this study are shown in Table 1 above.

C. INSTRUMENTATION

The questionnaire employed in this study was developed at the Naval Postgraduate School, Monterey, California, expressly for the purposes cited above. Items selected for inclusion in the questionnaire were drawn from existing instruments when possible. (Cf. Giauque, et al for rationale for question selection).

Although not every item was subjected to analysis in the present study, a description of the various segments of the instrument is appropriate. Unless a source of the question is given, it should be assumed that the question was designed by members of the primary research team. Part I relates to the role discription and job setting of the respondent. In the case of those who were engaged in providing direct care to patients, Part II is comprised of a list of medical tasks with five-point Likert-type scales indicating the relative frequency the individual is required to perform each task. Part III(A) are organizational climate questions addressing the dimensions of communication flow, human resources emphasis, teamwork, work facilitation and work group processes. These items are borrowed from the Navy Human Resource Management Survey which in turn had adapted the questions from the Survey of Organizations developed by the Institute for Social Research, University of Michigan.

Part III(B) is directed at the respondent's perception of various structural dimensions such as formalization, hierarch of authority, and specificity of rules and procedures. The questions follow the work of Hage, Aiken, and Marrett (1971) with adaptions made for the medical setting. Part III(C) is an assessment of personal influence in determining medical and administrative practices and the degree of influence on these matters attributed to other roles in the work setting. Again, similar adaptation from the Survey of Organizations was made. Part III(D) is a measure of the respondent's perception of the degree of contribution to quality medical care made by others. Part III(E) contains job and military career satisfaction questions taken from the Navy Human Resource Management Survey. Part IV addresses seven major career values designed to describe the type of career orientation of the respondent. Part V contains demographic data and asks the respondent to indicate how much longer he intended to remain in the military.

D. ANALYSIS

Since the data available for use in this study were derived from a one-time questionnaire, the data do not allow for analysis of causality. Moreover, the possible existence of high multicollinearity among the variables in the raw data would violate the crucial assumptions of the more powerful analytic techniques such as path analysis and multiple regression.

1. Categorizing the Sample

The model described in Chapter II, hypothesizes three outcomes of organization commitment: productivity, retention, and efficiency. Of the three, retention is the primary focus here. Based upon the suggestion that the best predictor of personnel retention is the employee's own direct estimate of his future tenure (Atchison and Lefferts, 1972; Kraut, 1975), the sample was divided according to whether the sum of a subject's present length of service plus the length of time he intended to remain, indicated an intention to remain in military service for an entire career. For the purposes of this study, a career was defined as 18 years active service rather than the standard minimum of 20 years. This figure was selected due to the possibility of respondents rounding off to the nearest value and the enlisted personnel policy allowing for the accrual of "constructive" time for early reenlistment. This policy permits retirement before 20 years of service.

The research of Flowers and Hughes and the exception taken to Becker's theory, both described in Chapter II, point to the need for a qualitative distinction within the group committed to the organization as to the willingness to work toward its objectives. Such a distinction is also possible within the group indicating an eventual termination of their service prior to the career point. Item 12 of Part III(A), "To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?" was used to divide the sample into high and low groups. The lower limit for the highly motivated was position 4, "To a great extent," on the five-point Likert-type scale. This limit was arbitrarily selected as

	HIGH MOTIVATION TO CONTRIBUTE BEST EFFORTS TO MISSION	LOW MOTIVATION TO CONTRIBUTE BEST EFFORTS TO MISSION
EXPRESSED INTENTION TO REMAIN	GROUP I ACTIVE COMMITMENT	GROUP II PASSIVE COMMITMENT
EXPRESSED INTENTION TO LEAVE	GROUP III POTENTIAL COMMITMENT	GROUP IV NO COMMITMENT

Figure 2 - CLASSIFICATION OF ORGANIZATION COMMITMENT

representing the minimal positive assertion of motivation by a respondent as opposed to the hedge of position 3, "to some extent," or the negative assertions of positions 1 and 2.

These two criteria provided the means for differentiating the respondents into four classifications of commitment; Group I, actively committed; Group II, passively committed; Group III, potentially committed; and Group IV, not committed. Fig 2 illustrates this arrangement.

The initial partitioning of the sample into groups was carried out for each occupational role within each service. This partitioning revealed that despite the lack of direct control over subject selection, the percent of career-intended versus noncareer and distribution of high and low motivation responses within the career dichotomy were fairly uniform by role across the three services (see Appendix A, Table 1). The general characteristics of those cases grouped according to level of organization commitment are shown by role and service in Tables 2 through 13 of Appendix A. Included in the tables is the percentage of the role sample providing direct patient care. This work aspect was included as a test on the functional use of skilled medical manpower. If a preponderance of the respondents within a role reported the converse to that expected of the role, the sample might be atypical and as such significantly affect the outcome of the analysis.

Because of relative uniformity within the roles across the services, the service samples were aggregated for the analysis. The general characteristics of the aggregate sample are shown by organization commitment group in Appendix A, Tables 14 through 17. The distribution of the cases based on the career and motivation criteria is shown by role in Table 2 below.

TABLE 2

Distribution of Cases Within
Organization Commitment Categories
for Entire Sample by Role

Commitment Category	Percentage Distribution					
	MD n=546	NS n=209	N n=184	NP n=291	PA n=241	HM n=804
Active	24.2%	75.1%	40.7%	53.9%	53.9%	39.7%
Passive	4.8%	12.5%	9.9%	10.7%	19.9%	10.7%
Potential	31.0%	8.1%	29.9%	19.6%	12.9%	26.1%
No	40.0%	4.3%	19.5%	15.8%	13.3%	23.5%

2. Processing the Raw Data

From the raw data provided by the questionnaire responses, eleven variables were constructed by grouping related items into indices. The objective here was to provide a more efficient means of examining the relative importance of those organization, job and personal variable dimensions expected to influence the decision to continue in or withdraw from the organization. Each indexed variable was derived by summing the responses to the component items and dividing by the number of components. The following variables were employed in the analyses:

1. Occupational commitment; questions 3 through 7 of Part (IV). This scale is comprised of the needs for technical competence, managing, early retirement and second career, job security, and innovation and creativity in the job. Certain of the items required reversing the raw scale prior to aggregation. A high score indicates an orientation toward an outside career.

2. Job satisfaction: Motivators; questions 4, 6, 7, 8, from Part III(E) and question 17 from Part III(A). This index is comprised of the Herzberg-type motivators, the work itself, autonomy, progress to date, promotion opportunity, and a Maslow-type satisfier, feelings of pride and self-worth. A high score indicates a high level of satisfaction.

3. Job satisfaction: Hygienes; questions 1, 2, 3, and 5 from Part III(E). This index is similar to the one above and includes satisfaction with supervision, status, salary, and educational opportunities.

4. Medical formalization; questions 1 a, 2 a, and 3 a from Part III(B). This index assesses the degree of perceived formalization of medical task management. A low score indicates relative freedom from strict operating procedures and job description specificity.

5. Administrative formalization; questions 1 b, 2 b, and 3 b from Part III(B). This index is similar to the one above but addresses corresponding administrative task issues.

6. Medical autonomy; questions 4 a, 5 a, 6 a, 7 a, and 8 a from Part III(B). This index differs from Medical formalization in that the component items here address the perception of the centralization of decision-making. A low score on this index indicates that decisions are usually made at the working level.

7. Administrative autonomy; questions 4 b, 5 b, 6 b, 7 b, and 8 b from Part III(B). This index corresponds to Medical autonomy.

8. Group performance; questions 1 and 7 from Part III(A). The ability of the work group to maintain high standards of performance and to work well under pressure is reflected in this index.

9. Work communication; questions 8, 10, and 11 from Part III(A). The degree of flow of upward, lateral, and downward communication is measured by this climate index. A high score indicates a very responsive communications network.

10. Group affiliation; questions 2 through 6 from Part III(A). All items in this index relate to the responsiveness and cohesion of the work group in terms of group problem-solving, mutual encouragement and trust, resolution of disagreement, and planning and co-ordinating. A high score is consistent with high group affiliation.

11. Command organization; questions 9, 13, and 14 from Part III(A). Items relating to the degree of perceived consideration for human resources are included here. A high score is indicative of organizational concern for workload and time factors, organization of work activities, and welfare and morale of its personnel.

Other variables brought into the analysis which were left as discrete entities included:

12. Length of service category. This variable was measured on a six-point ordinal scale created by grouping of the continuous raw data given in years and months. The ordinal categories were: (1) two years or less; (2) more than two through four years; (3) more than four through eight years; (4) more than eight through 12 years; (5) more than 12 through 16 years; and (6) more than 16 years. The grouping of the years was selected to conform in general with the minimal active duty service time and with typical reenlistment periods.

13. Overall job satisfaction; question 18 from Part III(A). This summary attitude measure is scaled unidimensionally from very dissatisfied (a low score) to very satisfied (a high score).

14. Career-enhancing assignment; question 17 from Part III(A). This variable reflects the degree to which respondents perceive their present assigned work as consistent with their career objectives. It may be thought of as an instrumentality variable in the sense of Vroom's Expectancy Model with a high score indicating high instrumentality.

15. Need for independence; question 1 from Part IV. A preference for a career which allows one to work independently as opposed to working with others is measured here. A high score is indicative of a reportedly high need in this dimension.

16. Need for leisure time; question 2, Part IV. This variable relates to an individual's preference for a career in which the work does not interfere with one's family life or the development of outside interests. As with the need for independence, a high score here is indicative of a high need in this dimension.

The indices making up variables 1 through 7 were constructed *a priori* by grouping items felt to describe specific dimensions. Subsequent tests of each index using Spearman rank-order correlations demonstrated intercorrelations ranging from $r = .419$, $p < .001$ for the Occupational commitment components to $r = .675$, $p < .001$ among components of the Group performance index. Variables 8 through 11 consisted of items drawn from the Navy Human Resource Management Survey. The indices used here are those developed by Pecorella, Hausser, and Wissler (1974) for use with the Navy survey.

3. Strategy of Analysis

The rationale underlying this study rested on three primary assumptions. The first was that the decision to remain in or withdraw from participation in military health care is largely determined by an individual member's length of service and attitudes on a number of work-related dimensions. Secondly, it was assumed that individual members would differ in their attitudinal responses, and that the responses would tend to partition the members into relatively homogenous groups representing the four levels of organization commitment. Third, because of the unique aspects of the several medical roles, it was assumed that the manner in which members were differentiated into groups would depend on their medical role.

These assumptions were tested by subjecting the data to a series of stepwise discriminant analyses. The specific computations were performed with the descriminant analysis program designed by Tucci and Klecka (1975). The criterion used for controlling the stepwise selection of the independent variables was smallest Wilks' lambda which results in the selection of the variable yielding the largest overall multivariate F ratio of differences among the group means. This process maximizes the distinction among the groups on the set of variables while maintaining homogeneity within the groups.

This technique was chosen for two reasons. First, it provided a method for statistically distinguishing among the four groups while taking into account the interaction among the variables. Secondly, it provided a classification technique in which the relative effectiveness of the discriminating variables could be tested. Hence, if in a

second pass through the data a relatively high percentage of cases were classified into the correct group, the combination of variables entering into the analysis could be considered "good" discriminators. Additionally, a classification table is printed which shows where the misclassifications occur.

IV. RESULTS OF DISCRIMINANT ANALYSIS

A. VARIABLES ENTERING THE ANALYSIS

The results of the stepwise discriminant analysis for each of the six medical roles are summarized in Table 3. Each role had a different number of variables which entered its analysis and a different relative discriminating strength associated with the variables.

Of the sixteen variables available to the analysis, four consistently entered: Length of Service, Command Organization, Occupational Commitment, and Job Satisfaction (Hygienes). The first two variables were among the three most powerfully discriminating variables for each role. As indicated by the total number of steps before the analysis terminated, at least seven and as many as twelve additional variables entered before the maximum discriminating ability was reached. Only one variable, Group Affiliation, failed to enter into any of the six discriminant analyses.

Examination of the means associated with Length of Service reveals a similarity between active and passive commitment and between potential and no commitment. However, a substantial difference separates the former two categories from the latter pair. Both active and passive committed groups have longer service times.

TABLE 3

Stepwise Order of the Variables Entering the Discriminant Analyses by Role

Variable	Step Entered for Medical Role					
	MD	MS	M	MP	PA	HM
Length of service	1	1	2	2	1	1
Command organization	2	3	1	1	2	2
Overall job satisfaction	3	2	-	-	7	4
Occupational commitment	4	11	3	9	4	5
Need for independence	5	8	6	7	-	11
Career enhancement	6	-	7	6	3	6
Job satisfaction (Hygienes)	7	10	4	8	5	12
Medical autonomy	8	6	-	-	-	14
Work communication	9	-	5	10	6	8
Administrative autonomy	-	4	-	-	-	7
Administrative formalization	-	5	-	4	8	-
Group performance	-	7	8	-	9	13
Job satisfaction (Motivators)	-	9	-	3	-	3
Need for leisure	-	-	9	5	-	9
Medical formalization	-	-	-	-	-	10
Group affiliation	-	-	-	-	-	-
Total number of steps	9	11	9	10	9	14

Mean scores for Command Organization show a different dichotomy. In this case, active and potential commitment means are higher than those for passive and no commitment. When considered together, these two variables provide a partitioning of the cases into the four categories of commitment which parallels the *a priori* criteria for commitment classification: "expressed intention to continue active service" and "motivation to put forth best efforts to the command's mission".

Occupational Commitment and Job Satisfaction (Hygienes) each consistently serve to isolate the no commitment category from the other three, but do so in a different manner. The no commitment category scores highest on the Occupational Commitment variable and lowest on Job Satisfaction (Hygienes). The remaining variables entering the discriminant analysis serve to refine the ability to classify the cases by accounting for additional increments of variance.

Further examination of the means on the attitudinal variables (Appendix A, Tables 18 through 23) demonstrates a general rank ordering which places active commitment at the highest position followed by potential commitment, passive commitment, and finally no commitment. This pattern holds fairly consistently regardless of the medical role. However, notable exceptions are to be found on certain of the variables. The no commitment category scores highest on Occupational Commitment and Need for Independence. The passive committed individuals score highest on Administrative Formalization, the measure of the degree of perceived formality in dealing with administrative tasks.

B. COMMITMENT GROUP PROFILES

The means of the variables when inspected by category of organization commitment permits the development of a general profile for each category. To the extent that variables did not enter the analysis of a role, the generalizations may be inappropriate for that specific role.

- Active Commitment. Individuals categorized as actively committed had lengths of service similar to the

passively committed, but well beyond those of both potentially committed and noncommitted individuals. They perceived a positive concern by their command for consideration of human resources. In all of the job satisfaction measures, actively committed individuals indicated a fair amount of satisfaction and reported their assigned work to be greatly career-enhancing. The performance of the immediate work group and the responsiveness of the communications network were rated high. Both the need for independence and the orientation toward a career outside the military were rated as neutral.

- Passive Commitment. The passive commitment category perceived little evidence of concern by the command for personnel interests. Individuals viewed their job assignments to be from little to some extent career-enhancing. Overall job satisfaction was rated as neutral to fairly satisfying despite no apparent satisfaction or dissatisfaction on the motivator and hygiene dimensions. Physician's assistants provided an exception to this generalization in that they were dissatisfied with the hygiene factors (status, salary, etc.). The estimation of the effectiveness of work communication was also variable. Nurse pratitioners indicated that little information is communicated in contrast to the remainder of the individuals in this category who were neutral on this work dimension. The performance of the work group was rated high. Like the active commitment category, passively committed individuals remained neutral on the needs for independence and a career outside the military.

- Potential Commitment. In spite of indicating a high motivation to contribute their best efforts, individuals in the potential commitment category maintained a neutral position on a number of the dimensions. These

included communication, the command's concern for personnel, the need for independence, and the appraisal of assigned work as career-enhancing. Job satisfaction indicators were rated as fairly satisfying for all roles except physicians and physician's assistants who again were neither satisfied nor dissatisfied. On the measures of autonomy, they perceived a reasonable amount of freedom in their jobs, but less than either the active or passive groups. Similarly, their apparent preference for a career outside the military was higher than the active and passive groups.

• No Commitment. The group of individuals categorized as having no commitment to the organization took a position tending toward the extreme on most variables. The command was perceived as having little concern for the work and welfare of its personnel, and the communication channels were held to have little effectiveness. The work assignments of members of this group were seen as offering little to very little career enchancement; similar levels of dissatisfaction were reflected in the three job satisfaction dimensions. Commitment in a direction outside the organization was the highest of the four groups. This was accompanied by great needs for work independence and for leisure time.

C. PREDICTION RESULTS

The final stage of the discriminant analysis derived four separate classification functions in which organization commitment was considered the dependent variable and the discriminating variables served as independent variables. On the basis of subjects' responses to the set of variables, they were classified as belonging in one of the four

commitment categories to which they most closely resembled. This classification was in turn compared with the actual classification to determine if the prediction was "correct".

Thus if a particular physician originally categorized as actively committed on the basis of his career intention and motivation criteria responded to questions in a manner similar to the group of actively committed physicians, he would be "correctly" classified. However, if his responses tended to resemble more closely the pattern associated with one of the other groups, he would be "incorrectly" classified.

Over all subjects, the classification process yields a summary score of the percent of "grouped" cases correctly classified. This percentage value is one indication of how well the categories of organization commitment may be distinguished on the variables.

The percentage of "grouped" cases which were classified correctly ranged from a high of 88.04% for nursing supervisors to a low of 67.70% for nurse practitioners. The overall pattern of the predictions remained stable across all of the medical roles. Results of the predictions for physicians are given in Table 4 and are representative of the predictions for the remaining roles (Appendix A, Tables 24 through 28).

• Active vs. No Commitment. When contrasting active commitment with no commitment, it is seen that very few misclassifications occur between these two categories. This is consistent with the manner in which the categories were derived in that the two groups share neither of the partitioning criteria.

TABLE 4

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR PHYSICIANS

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	132.	101. 76.5%	2. 1.5%	25. 18.9%	4. 3.0%
GROUP 2 PASSIVE COMMIT	26.	12. 46.2%	6. 23.1%	4. 15.4%	4. 15.4%
GROUP 3 POTENTIAL COMMIT	169.	22. 13.0%	0. 0.0%	115. 68.0%	32. 18.9%
GROUP 4 NO COMMITMENT	219.	2. 0.9%	1. 0.5%	34. 15.5%	182. 83.1%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 73.99%

- Potential vs. Passive Commitment. Likewise, potential and passive commitment are at opposite poles on the partitioning criteria. However, the pattern of misclassification between them is not as clear because the passive group tends to be predicted into all categories. A sharper distinction is to be found in the case of physician's assistants (Appendix A, Table 27).

- Passive vs. No Commitment. Individuals who are categorized as passively committed or noncommitted share the partitioning criterion of indicating a low motivation to contribute their best efforts to their command's mission and tasks but differ in that noncommitted individuals intend to leave the military service. The discriminant predictions show that these two groups can be successfully distinguished by the discriminating variables in all roles except physician.

- Active vs. Potential Commitment. Active commitment and potential commitment sharing high motivation on the same criterion, by contrast have a substantial cross-over in the predictions and cannot be discriminated to the extent seen between passive and noncommitted. This result holds true for the six medical roles examined.

- Active vs. Passive Commitment. The two groups intending to remain in service present mixed results on the basis of the predictions. In all six analyses, there were large percentages predicted from the passive commitment category into active commitment, although the trade-off was not seen to be bilateral. The percentages of actively committed individuals misclassified as passively committed was uniformly small.

- Potential vs. No Commitment. The contrast between the potentially committed group and the noncommitted group, while consistent in the six roles, is the least sharply distinguished. There exists a considerable trade-off between the groups with only a marginally larger prediction from no commitment into potential commitment.

The prediction results demonstrate an ability to discriminate the four categories of organization commitment on responses to the variables entering into the stepwise analyses. The particular variables associated with each analysis show that no one subset is capable of predicting the actual category of commitment in more than one medical role. Additionally, these differences indicate that an explanation of organization commitment is necessary for each role considered in terms of the variables in the study.

V. DISCUSSION

The complexity of the array of variables impinging upon organization commitment is demonstrated by the number and type of variables which entered the stepwise discriminant analysis. In order to explain this concept adequately, it is necessary to consider simultaneously organization climate, job satisfaction, the needs and orientation of the individual, and length of service as a minimum number of factors relating to organization commitment.

The mixed results of previous correlational studies relating personnel retention or turnover to various organizational climate dimensions and to job satisfaction are partially explained when individuals are partitioned into categories of organization commitment. Vroom's Expectancy Model suggests that individuals who perceive their current assigned duties as leading to their occupational objectives are inclined to remain. This is found to be true for the active commitment category and the converse is demonstrated in the no commitment category. However, passively committed individuals saw little career enhancement in their jobs, yet by definition chose to remain for the career minimum length of service. This would seem to contradict the basic argument of the Expectancy Model and would account for moderate correlations.

The passive commitment group also confounds the association between retention and job satisfaction. Job satisfaction theory would predict that high satisfaction relates directly to continuation in the job. The passive commitment group reports neutral to only moderate

satisfaction despite deciding to remain. Moreover, the potentially committed group reports a higher level of satisfaction than the passive but elect to leave the service.

This evidence would argue in favor of the existence of an intervening variable between climate or job satisfaction and retention. The consistently high discriminating power of length of service and the sharp distinction between mean service times between passive and potential commitment groups suggest that the decision to continue in service is strongly influenced by the time already served to the extent of overriding a lower job satisfaction and lowered career enhancement of the present job. This supports Becker's assertion that the more one has invested in an organization and thus could lose by leaving it, the greater the personal commitment to the organization.

In some sense, the results of the analysis suggest that the four categories of organization commitment can assume two rank-orders from high commitment to low commitment depending upon the variable under consideration. For example, the concept of occupational commitment was operationalized by the variable measuring the degree of preference for job characteristics found largely outside the military setting. The commitment group mean scores on this variable ordered the groups as : Active, Passive, Potential, and No commitment. Alternatively, job satisfaction and organizational climate variables, reversed the order of two groups to rank potential commitment immediately after active commitment, placing passive commitment just ahead of no commitment.

From the perspective of the organization, the question of how the categories of commitment should be ordered depends upon how commitment is to be viewed. If personnel

retention is the sole criterion, the groups labeled active and passive commitment would be considered as being higher levels than potential and no commitment. Assuming away individual ability and productivity, a concern for work quality would rank active and potential commitment above passive and no commitment.

These two competing views would appear irreconcilable but real world concerns necessitate their being considered simultaneously. This situation is roughly analogous to an unresolvable economic analysis which attempts to vary cost and effectiveness together. This may account for the tendency for the personnel retention-turnover problem to be treated as an either-or situation. Certainly, decisions are considerably simplified when this framework is adopted, but their rationale and effectiveness are open to question.

One answer to this paradox lies possibly in the ability to focus selectively on one of the four commitment categories at a time. The organization's concern with any given commitment group can be dealt with most effectively by identifying the particular problems associated with it. This is made possible through an understanding of the characteristics and perceptions of individuals who constitute the group.

The profile of the passive commitment category suggests a psychological distance from the organization and in this sense is quite similar to the group reported by Flowers and Hughes (1973). The tendency for the discriminant analysis to predict individuals in this group into other categories suggests a wide variance of individual response patterns. That they were frequently predicted into the active commitment category gives reason for optimism for reversing their position.

However, there is an important distinction between the military medical sample of this study and corporate employees in the Flowers and Hughes study in that the military setting is marked by job changes as frequent as every three to four years. The possibility of being transferred into a more career-enhancing job or one that is more satisfying is much more likely in the military. The passive commitment group may be responding to questions in the study basing the evaluation of their present job on a more satisfying past job. This is consistent with Vroom's (1970) contention that a person's attitude toward his role in an organization is in part a function of those outcomes which the person expected to receive or has received at earlier points in time. If this is the case, changing the job may be all that is required to improve the motivation and raise the level of commitment. Only a longitudinal study would confirm this belief.

The differences between the potentially committed and actively committed are no less important. The fact that individuals in the potential commitment group maintain a neutral position on many of the climate dimensions raises the possibility of change in the direction of the actively committed. While they are, by definition, a group of highly motivated individuals, career enhancement and improved communications may mitigate their decision to leave the military service. Involvement of this group in attractive programs or assignments which would have the effect of lengthening their active service would bring the impact of length of service to bear and thus increase the probability of retention. Thus personnel policies which make meaningful assignments just before mid-career or reenlistment points could have significant benefit.

This optimistic view must however be taken with due caution to the extent that the potentially committed

indicate more of an occupational commitment than the actively committed group. Whether this extraorganizational orientation is due to job factors and can be modified or is due to personality factors which would make it more resistant to change cannot be addressed by this study.

The group classified as having no commitment to the organization responded to most of the questions in such a manner as to confirm the suspicion that it is unlikely that significant numbers could be retained in active service. The small percentages of nursing supervisors, nurse practitioners, and physician's assistants in this category who were erroneously placed in the active committed group by the discriminant analysis predictions were most likely so classified as a result of their length of service and the relatively small size of the group sample. It was not possible to verify this belief by isolating those cases for individual inspection, but these roles generally require the participants to have longer service times.

The degree of pessimism expressed by the noncommitted group raises doubt that anything less than the most extensive organizational effort would contribute more than marginal improvement to the estimation of organizational climate and job satisfaction. Even then, the prospects of retaining them in military medicine appear unlikely. Indeed, to the degree that their job performance reflects this pessimism, the advisability of retaining them at all is uncertain.

The differences in the number and categories of variables which contributed to the discriminating processes in the six medical roles studied suggests that a specific explanation of organization commitment must be applied on a role-by-role basis. Apparently, there is sufficient variability of needs of individuals and of perceptions of

the organization among the roles to preclude applying a general, organizational explanatory model. This would imply that specific policy actions taken to increase commitment would have differential and perhaps competing effects on certain roles when applied across the board.

An unexpected result of the analysis was the appearance of the variable, Command Organization, as the first or second most powerfully discriminating variable in each of the six roles. This variable related to the extent of concern for personnel welfare perceived by the respondent. Both the active and potentially committed groups rated their commands quite high in sharp contrast to the passive and no commitment categories.

It is of importance to note that this variable does not relate to the more familiar issues of salary, status, or educational opportunity which frequently enter into discussions of personnel turnover in military medicine. Rather it deals with the management of human resources. This is not to say that individuals are leaving the military service <u>because</u> of perceived lack of concern on the part of their command, but the significance of lack of concern should not be underestimated. The possibility for successful intervention in this area is very great and has potential payoff to the health care system by increasing motivation even if retention is not measurably improved.

VI. CONCLUSION

The issue of how to retain personnel in their jobs, whether it is military health care or an automobile assembly line, is complex and this study does not resolve the problem. To some degree, the study has pointed out the scope of the problem by identifying certain seemingly unrelated elements which effectively differentiated between individuals intending to remain in military health care and others who elect to leave it.

The partitioning of the study sample into categories of organization commitment appears to be a worthwhile technique for several reasons. Paramount of these is the fact that it can more clearly focus the problem of personnel losses upon those highly motivated individuals who leave active service and who thus represent significant opportunity losses to the health care system. This recognition may serve as one means of sharpening retention efforts. Additionally, the identification of individuals who remain in active service but who indicate little motivation for exerting their maximum efforts on behalf of the system draws reference to areas which organizations can explore to make more efficient use of costly human resources.

This procedure also permits a close examination of the organization factors which are and are not related to personnel losses; thus it may well serve to indicate when the military is making all reasonable efforts in keeping attrition to a minimum. Certainly, this would be useful information in terms of deciding resource allocation as would the knowledge that personnel are being pulled out of

service for whatever reason and not being driven out. In the final analysis, the fact must be acknowledged that for certain highly desirable individuals, no action on the part of the organization will be sufficient to prevent their leaving.

The surprisingly strong discriminating effect that the index measuring work organization and command interest in personnel welfare and morale suggests that in many cases the leadership necessary to develop staff loyalty and dedication is deficient. If this is the case, the remedy is certainly less expensive than trying to buy the loyalty and dedication of health care personnel through additional economic incentives. Given the increasing demands being placed on the military health care system, a lack of attention to the personal needs and expectations of all individuals making up the health care team can only reinforce the turnover problem. While a perceived concern of the command for the welfare of its personnel may not stem the flow of those choosing to leave, the short-term interests of the command, its personnel, and the patient population served can only benefit from an upswing in motivation among the staff.

Elements in addition to those dimensions identified in this study may also contribute significant influence to the development of organization commitment. By virtue of the survey data which provided the foundation for the analysis, objective measures of organization structure were not included either because they were not available or because the sample would have become fragmented.

Subsequent analyses, while providing for a more representative sampling distribution, can enlarge upon these finding by controlling for such dimensions as the size of the command, span of control, work setting, and other structural components. Studies with a longitudinal

capability would allow for the measurement of dynamic interplay of the variables in the model as individuals experience organizations over time. The effect of ascendency in rank and the correlates of this process such as increased responsibility, change in perspective of the organization, and increased pay and allowances would be possible to assess given a study design of a longitudinal nature.

Organization commitment appears to be a reasonable construct by which to assess not only the efforts made in behalf of influencing personnel retention but also in identifying those aspects of the organization which could diminish the productivity of its members. Any effort to understand more clearly the effects of health care organizations on their personnel can only result in a climate which is more conducive to the delivery of service to the patient population it is charged to serve.

APPENDIX A

SUPPLEMENTARY TABLES

TABLE 1
Distribution of Cases Within Organization Commitment Categories Comparing Services by Role

Commitment Category	Percentage Distribution					
	MD	NS	N	NP	PA	HM
Active Commitment						
U.S. Army	22.6%	67.9%	34.9%	47.6%	72.2%	45.5%
U.S. Navy	25.7%	82.9%	46.7%	48.8%	59.6%	29.3%
U.S. Air Force	24.0%	75.6%	45.2%	59.5%	48.4%	40.9%
Passive Commitment						
U.S. Army	4.3%	17.0%	4.8%	2.3%	11.1%	6.5%
U.S. Navy	4.5%	10.6%	15.5%	11.1%	11.5%	3.7%
U.S. Air Force	5.1%	10.8%	10.7%	14.3%	24.0%	16.2%
Potential Commitment						
U.S. Army	27.8%	9.4%	36.5%	30.2%	13.9%	29.8%
U.S. Navy	38.0%	4.4%	26.7%	24.5%	15.1%	40.0%
U.S. Air Force	29.1%	9.0%	25.0%	12.5%	11.4%	17.9%
No Commitment						
U.S. Army	45.2%	5.7%	23.8%	19.8%	2.8%	18.1%
U.S. Navy	31.8%	2.1%	11.1%	15.6%	13.5%	27.0%
U.S. Air Force	41.8%	4.5%	19.1%	13.7%	16.5%	25.1%

TABLE 2

Characteristics of the Actively Committed by Role

U.S. Army

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	26	36	22	41	26	98
As percent of role in service sample	22.6%	67.9%	34.9%	47.6%	72.2%	45.5%
Percent male	100%	22.2%	40.9%	34.1%	96.2%	90.8%
Median age in years	41	40	32	32	35	34
Length of service category:						
2 or less years	1		1	4		4
2+ to 4 years	1		3	2		6
4+ to 8 years	5	4	8	9	1	5
8+ to 12 years	6	7	7	14	3	27
12+ to 16 years	4	6	1	8	11	22
More than 16 years	9	19	2	4	11	34
Rank strata:						
E1-E3						
E4-E6					3	51
E7-E9					1	47
W1-W4					22	
O1-O3	1	9	18	27		
O4-O6	25	27	4	14		
Percent providing direct patient care	100%	22.2%	90.9%	100%	96.2%	80.6%

TABLE 3

Characteristics of the Actively Committed by Role

U.S. Navy

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	34	39	21	22	31	56
As percent of role in service sample	25.7%	82.9%	46.7%	48.8%	59.6%	29.3%
Percent male	97.0%	2.6%	33.3%	27.3%	96.8%	87.5%
Median age in years	42	43	32	33	34	26
Length of service category:						
2 or less years	1					8
2+ to 4 years	1		1	1		6
4+ to 8 years	5		7	8	2	21
8+ to 12 years	3	3	8	6	5	7
12+ to 16 years	5	10	2	5	11	5
More than 16 years	19	26	3	2	13	9
Rank strata:						
E1-E3						6
E4-E6						43
E7-E9						6
W1-W4					51	
O1-O3		1	13	15		
O4-O6	34	38	8	7		
Percent providing direct patient care	94.0%	23.1%	76.2%	100%	100%	62.5%

TABLE 4

Characteristics of the Actively Committed by Role

U.S. Air Force

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	76	84	38	100	76	171
As percent of role in service sample	24.0%	75.6%	45.2%	59.5%	48.4%	40.9%
Percent male	98.7%	8.3%	13.2%	12.0%	100%	94.7%
Median age in years	41	42	34	37	35	33
Length of service category:						
2 or less years	11		1	3		3
2+ to 4 years	5		3	3		9
4+ to 8 years	11	2	10	19	2	21
8+ to 12 years	9	10	8	31	6	29
12+ to 16 years	17	16	7	22	23	33
More than 16 years	23	56	9	22	45	76
Rank strata:						
E1-E3						6
E4-E6					4	105
E7-E9					72	60
W1-W4						
O1-O3	3	13	22	50		
O4-O6	73	71	16	50		
Percent providing direct patient care	98.7%	35.7%	78.9%	97.0%	98.7%	67.8%

TABLE 5

Characteristics of the Passively Committed by Role

U.S. Army

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	5	9	3	2	4	14
As percent of role in service sample	4.3%	17.0%	4.8%	2.3%	11.1%	6.5%
Percent male	100%	66.7%	33.3%	0%	100%	78.6%
Median age in years	44	41	30	35	38	29
Length of service category:						
2 or less years						1
2+ to 4 years						3
4+ to 8 years		2	2	1		1
8+ to 12 years	1	1	1			3
12+ to 16 years	1				1	1
More than 16 years	3	6		1	3	5
Rank strata:						
E1-E3						
E4-E6						10
E7-E9						4
W1-W4					4	
O1-O3		2	3	1		
O4-O6	5	7		1		
Percent providing direct patient care	100%	22%	100%	100%	100%	100%

TABLE 6

Characteristics of the Passively Committed by Role

U.S. Navy

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	6	5	7	5	6	7
As percent of role in service sample	4.5%	10.6%	15.5%	11.1%	11.5%	3.7%
Percent male	83.3%	11.1%	28.6%	0%	100%	100%
Median age in years	35	46	33	36	33	28
Length of service category:						
2 or less years	1					1
2+ to 4 years						1
4+ to 8 years	1		3	1		2
8+ to 12 years	1		3	1	1	2
12+ to 16 years	2	2	1	1	4	
More than 16 years	1	3		2	1	1
Rank strata:						
E1-E3						
E4-E6					1	6
E7-E9					1	1
W1-W4					4	
O1-O3	1		4	1		
O4-O6	5	5	3	4		
Percent providing direct patient care	100%	0%	100%	100%	100%	85.7%

TABLE 7

Characteristics of the Passively Committed by Role

U.S. Air Force

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	16	12	9	24	38	68
As percent of role in service sample	5.1%	10.8%	10.7%	14.3%	24.0%	16.2%
Percent male	100%	16.7%	11.1%	8.3%	100%	92.6%
Median age in years	38	41	42	37	36	32
Length of service category:						
2 or less years	2		1			2
2+ to 4 years			1			1
4+ to 8 years	4		1	3	1	11
8+ to 12 years	3		1	12	4	19
12+ to 16 years	2	7	1	7	11	11
More than 16 years	5	5	4	2	22	24
Rank strata:						
E1-E3						1
E4-E6					1	57
E7-E9					37	10
W1-W4						
O1-O3	2		3	14		
O4-O6	14	11	6	10		
Percent providing direct patient care	93.8%	50.0%	77.8%	95.8%	100%	77.9%

TABLE 8

Characteristics of the Potentially Committed by Role

U.S. Army

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	32	5	23	26	5	64
As percent of role in service sample	27.8%	9.4%	36.5%	30.2%	13.9%	29.8%
Percent male	100%	0%	4.3%	0%	80.0%	51.6%
Median age in years	30	28	25	27	28	23
Length of service category:						
2 or less years	17		8	5		19
2+ to 4 years	4	1	7	9		27
4+ to 8 years	9	3	7	10	4	12
8+ to 12 years	1	1	1	2	1	5
12+ to 16 years	1					1
More than 16						
Rank strata:						
E1-E3						6
E4-E6					1	57
E7-E9						1
W1-W4					4	
O1-O3	7	4	22	25		
O4-O6	25	1	1	1		
Percent providing direct patient care	100%	40%	91.3%	96.2%	100%	87.5%

TABLE 9

Characteristics of the Potentially Committed by Role

U.S. Navy

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	50	2	12	11	8	77
As percent of role in service sample	37.9%	4.3%	26.7%	24.4%	15.4%	40.1%
Percent male	96%	0%	16.6%	18.2%	100%	59.7%
Median age in years	32	34	26	29	28	22
Length of service category:						
2 or less years	28		1	2		31
2+ to 4 years	7		4	2		31
4+ to 8 years	10	1	5	4	4	14
8+ to 12 years	1		2	3	4	1
12+ to 16 years	3					
More than 16 years	1	1				
Rank strata:						
E1-E3						28
E4-E6					2	49
E7-E9						
W1-W4					6	
O1-O3	9	1	11	10		
O4-O6	41	1	1	1		
Percent providing direct patient care	100%	50%	91.7%	100%	100%	81.8%

TABLE 10

Characteristics of the Potentially Committed by Role

U.S. Air Force

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	92	10	21	21	18	75
As percent of role in service sample	29.1%	9.0%	25.0%	12.5%	11.4%	17.9%
Percent male	97.8%	0%	14.3%	0%	100%	70.7%
Median age in years	32	31	29	30	30	23
Length of service category:						
2 or less years	56	3	8	4		24
2+ to 4 years	14		5	3		26
4+ to 8 years	15	3	3	9	8	21
8+ to 12 years	6	2	3	5	5	2
12+ to 16 years	6	2	2		5	1
More than 16 years						1
Rank strata:						
E1-E3						30
E4-E6					1	45
E7-E9					17	
W1-W4						
O1-O3	24	7	21	19		
O4-O6	68	3		2		
Percent providing direct patient care	98.8%	70.0%	90.5%	95.2%	100%	89.3%

TABLE 11

Characteristics of the Noncommitted by Role

U.S. Army

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	52	3	15	17	1	39
As percent of role in service sample	45.2%	5.7%	23.8%	19.8%	2.8%	18.1%
Percent male	98.0%	33.3%	20.0%	11.1%	100%	41.0%
Median age in years	30	26	25	27	29	23
Length of service category:						
2 or less years	34		2			7
2+ to 4 years	7			4		16
4+ to 8 years	9	3	11	10		16
8+ to 12 years	2		2	2	1	
12+ to 16 years				1		
more than 16 years						
Rank strata:						
E1-E3						3
E4-E6						36
E7-E9						
W1-W4					1	
O1-O3	13	3	15	16		
O4-O6	39			1		
Percent providing direct patient care	100%	100%	93%	94%	100%	90%

TABLE 12

Characteristics of the Noncommitted by Role

U.S. Navy

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	42	1	5	7	7	52
As percent of role in service sample	31.8%	2.1%	11.1%	15.6%	13.5%	27.0%
Percent male	100%	100%	0%	14.3%	100%	71.1%
Median age in years	30	26	25	27	29	22
Length of service category:						
2 or less years	23			1		9
2+ to 4 years	13	1	3	3		32
4+ to 8 years	6		2	3	3	9
8+ to 12 years					4	2
12+ to 16 years						
more than 16 years						
Rank strata:						
E1-E3						11
E4-E6						41
E7-E9						
W1-W4					7	
O1-O3	11	1	5	7		
O4-O6	31					
Percent providing direct patient care	100%	100%	100%	100%	86%	71%

TABLE 13

Characteristics of the Noncommitted by Role

U.S. Air Force

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	132	5	16	23	26	105
As percent of role in service sample	41.8%	4.5%	19.1%	13.7%	16.5%	25.1%
Percent male	98%	0%	19%	13%	96%	85%
Median age in years	30	33	28	28	28	23
Length of service category:						
2 or less years	110		6	2		27
2+ to 4 years	9		3	5		49
4+ to 8 years	10	3	5	13	11	20
8+ to 12 years	3	2	2	2	12	7
12+ to 16 years				1	3	2
More than 16 years						
Rank strata:						
E1-E3						35
E4-E6					3	70
E7-E9					23	
W1-W4						
O1-O3	38	4	15	23		
O4-O6	94	1	1			
Percent providing direct patient care	98%	80%	62.5%	95.7%	100%	88.6%

TABLE 14

Characteristics of the Actively Committed by Role

Total Sample

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	136	159	81	163	133	325
As percent of role in sample	24.2%	75.4%	42.2%	54.5%	54.1%	39.3%
Percent male	98.5%	10%	30%	19.6%	98%	92.3%
Median age in years	41	42	33	36	35	33
Length of service category(n):						
2 or less years	13		2	7		15
2+ to 4 years	7		7	6		21
4+ to 8 years	21	6	25	36	5	47
8+ to 12 years	18	20	23	51	14	63
12+ to 16 years	26	32	10	35	45	60
More than 16 years	51	101	14	28	69	119
Rank strata:						
E1-E3						13
E4-E6					7	199
E7-E9					73	113
W1-W4					53	
O1-O3	4	23	53	92		
O4-O6	132	136	28	71		
Percent providing direct patient care	98%	30%	81%	98%	98%	71%

TABLE 15

Characteristics of the Passively Committed by Role

Total Sample

Characteristic	Medical Role					
	MD	MS	N	NP	PA	HM
N	27	26	19	31	48	89
As percent of role in sample	4.8%	12.3%	9.9%	10.4%	19.5%	10.8%
Percent male	96%	31%	21%	6.5%	100%	91%
Median age in years	40	42	33	36	35	31
Length of service category (n):						
2 or less years	3		1			4
2+ to 4 years			1	2		5
4+ to 8 years	5	2	6	5	1	14
8+ to 12 years	5	1	5	13	5	24
12+ to 16 years	5	9	2	8	16	12
More than 16 years	9	14	4	5	26	30
Rank strata:						
E1-E3						1
E4-E6					2	73
E7-E9					38	15
W1-W4					8	
O1-O3	3	3	10	16		
O4-O6	24	23	9	15		
Percent providing direct patient care	96%	31%	90%	97%	100%	82%

TABLE 16

Characteristics of the Potentially Committed by Role

Total Sample

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	226	9	36	47	34	196
As percent of role in sample	40.1%	4.3%	18.8%	15.7%	13.8%	23.7%
Percent male	98%	22%	17%	13%	97%	72%
Median age in years	32	29	25	28	29	23
Length of service category(n):						
2 or less years	167		8	3		43
2+ to 4 years	29	1	6	12		97
4+ to 8 years	25	6	18	26	14	45
8+ to 12 years	5	2	4	4	17	9
12+ to 16 years				2	3	2
More than 16 years						
Rank strata:						
E1-E3						49
E4-E6					3	147
E7-E9					23	
W1-W4					8	
C1-O3	62	8	35	46		
O4-O6	164	1	1	1		
Percent providing direct patient care	99%	89%	81%	96%	97%	84%

TABLE 17

Characteristics of the Noncommitted by Role

Total Sample

Characteristic	Medical Role					
	MD	NS	N	NP	PA	HM
N	174	17	56	58	31	216
As percent of role in sample	30.9%	8.1%	29.2%	19.4%	12.6%	26.2%
Percent male	97.7%	0%	10.7%	3.4%	96.7%	61.1%
Median age in years	30	29	26	28	29	23
Length of service category(n):						
2 or less years	101	3	17	11		74
2+ to 4 years	25	1	16	14		84
4+ to 8 years	34	7	15	23	16	47
8+ to 12 years	8	3	6	10	10	8
12+ to 16 years	5	2	2		5	2
More than 16 years	1	1				1
Rank strata:						
E1-E3						64
E4-E6					4	172
E7-E9					17	1
W1-W4					10	
O1-O3	40	12	54	54		
O4-O6	134	5	2	4		
Percent providing direct patient care	99%	35%	91%	97%	100%	86%

TABLE 18

Mean Scores on the Most Discriminating Variables by Commitment Category

Physicians

Discriminating Variables[a]	Commitment Category Means			
	Active n=132	Passive n=26	Potential n=169	No n=219
1. Length of service	4.35	4.27	1.82	1.41
2. Command organization	3.80	2.64	3.41	2.33
3. Overall job satisfaction	4.40	3.50	3.79	2.28
4. Occupational commitment	3.18	3.45	3.70	3.92
5. Need for independence	2.86	3.15	3.38	3.80
6. Career enhancement	4.00	3.12	3.25	1.87
7. Job satisfaction (Hygienes)	3.98	3.33	3.31	2.33
8. Medical autonomy	1.53	1.68	1.70	1.86
9. Work communication	3.75	2.90	3.34	2.54

[a] Arranged in order of greatest discriminating power.

TABLE 19

Mean Scores on the Most Discriminating Variables by Commitment Category Nursing Supervisors

Discriminating Variables[a]	Commitment Category Means			
	Active n=157	Passive n=26	Potential n=17	No n=9
1. Length of service	5.43	5.35	3.18	3.11
2. Overall job satisfaction	4.41	2.73	3.82	2.11
3. Command organization	3.84	2.58	3.33	2.26
4. Administrative autonomy	2.07	2.39	2.60	2.80
5. Administrative formalization	3.30	2.71	3.12	3.19
6. Medical autonomy	1.91	2.27	2.19	2.22
7. Group performance	4.47	3.67	3.88	3.72
8. Need for independence	2.96	3.38	2.94	3.56
9. Job satisfaction (Motivators)	4.10	3.13	3.67	2.33
10. Job satisfaction (Hygienes)	4.24	3.33	3.74	2.97
11. Occupational commitment	2.85	1.91	3.01	3.47

[a] Arranged in order of greatest discriminating power.

TABLE 20

Mean Scores on the Most Discriminating Variables by Commitment Category

Nurses

Discriminating Variables[a]	Commitment Category Means			
	Active n=75	Passive n=18	Potential n=36	No n=55
1. Command organization	3.66	2.72	3.78	2.34
2. Length of service	3.99	3.94	2.27	2.50
3. Occupational commitment	2.90	2.71	3.31	3.39
4. Job satisfaction (Hygienes)	4.18	3.31	4.00	3.19
5. Work communication	3.84	2.72	3.48	2.80
6. Need for independence	2.97	2.94	3.36	2.69
7. Career enhancement	3.87	2.67	3.69	2.83
8. Group performance	4.29	3.97	4.13	3.82
9. Need for leisure	4.15	4.33	4.47	4.44

[a] Arranged in order of greatest discriminating power.

TABLE 21

Mean Scores on the Most Discriminating Variables
by Commitment Category
Nurse Practitioners

Discriminating Variables[a]	Commitment Category Means			
	Active n=157	Passive n=31	Potential n=46	No n=57
1. Command organization	3.59	2.43	3.48	2.46
2. Length of service	4.13	4.42	2.54	2.80
3. Job satisfaction (Motivators)	4.40	3.72	4.04	3.61
4. Administrative formality	3.13	2.78	2.82	3.02
5. Need for leisure	4918	4.06	4.39	4.26
6. Career enhancement	4.10	2.84	4.07	3.28
7. Need for independence	3.57	3.23	3.33	3.59
8. Job satisfaction (Hygienes)	4.19	3.44	3.88	3.58
9. Occupational commitment	3.37	3.30	3.43	3.57
10. Work communication	3.62	2.58	3.58	2.81

[a] Arranged in order of greatest discriminating power.

TABLE 22

Mean Scores on the Most Discriminating Variables by Commitment Category Physician's Assistants

Discriminating Variables[a]	Commitment Category Means			
	Active n=130	Passive n=48	Potential n=32	No n=31
1. Length of service	5.35	5.40	3.65	3.63
2. Command organization	3.44	2.28	3.13	2.63
3. Career enhancement	3.95	2.71	3.42	2.47
4. Occupational commitment	3.26	3.25	3.46	3.79
5. Job satisfaction (Hygienes)	3.33	2.45	3.06	2.52
6. Work communication	3.68	2.67	3.37	2.96
7. Overall job satisfaction	4.42	3.19	3.97	3.34
8. Administrative formality	3.15	2.74	2.98	2.99
9. Group performance	4.32	3.99	4.19	3.77

[a] Arranged in order of greatest discriminating power.

TABLE 23

Mean Scores on the Most Discriminating Variables
by Commitment Category
Medical Corpsmen

Discriminating Variables[a]	Commitment Category Means			
	Active n=319	Passive n=86	Potential n=210	No n=189
19 Length of service	4.50	4.41	1.98	2.12
2. Command organization	3.50	2.33	3.31	2.44
3. Job satisfaction (Motivators)	3.97	3.12	3.89	3.01
4. Overall job satisfaction	4.23	2.99	4.33	3.19
5. Occupational commitment	2.81	2.92	3.22	3.25
6. Career enhancement	3.87	2.52	3.85	2.74
7. Administrative autonomy	2.38	2.91	2.59	2.76
8. Work communication	3.68	2.67	3.52	2.89
9. Need for leisure	4.03	4.05	4.28	4.11
10. Medical formalization	3.33	3.02	3.33	2.99
11. Need for independence	3.23	3.63	3.35	3.44
12. Job satisfaction (Hygienes)	3.76	2.98	3.60	2.89
13. Group performance	4.29	3.80	4.09	3.83
14. Medical autonomy	2.21	2.57	2.21	2.37

[a] Arranged in order of greatest discriminating power.

TABLE 24

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR NURSING SUPERVISORS

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	157.	148. 94.3%	4. 2.5%	3. 1.9%	2. 1.3%
GROUP 2 PASSIVE COMMIT	26.	7. 26.9%	17. 65.4%	2. 7.7%	0. 0.0%
GROUP 3 POTENTIAL COMMIT	17.	4. 23.5%	0. 0.0%	12. 70.6%	1. 5.9%
GROUP 4 NO COMMITMENT	9.	1. 11.1%	0. 0.0%	1. 11.1%	7. 77.8%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 88.04%

TABLE 25

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR NURSES

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	75.	58. 77.3%	3. 4.0%	14. 18.7%	0. 0.0%
GROUP 2 PASSIVE COMMIT	18.	5. 27.8%	8. 44.4%	3. 16.7%	2. 11.1%
GROUP 3 POTENTIAL COMMIT	55.	9. 16.4%	1. 1.8%	38. 69.1%	7. 12.7%
GROUP 4 NO COMMITMENT	36.	1. 2.8%	2. 5.6%	9. 25.0%	24. 66.7%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 69.57%

TABLE 26

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR NURSE PRACTITIONERS

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	157.	136. 86.6%	6. 3.8%	11. 7.0%	4. 2.5%
GROUP 2 PASSIVE COMMIT	31.	15. 48.4%	11. 35.5%	2. 6.5%	3. 9.7%
GROUP 3 POTENTIAL COMMIT	57.	26. 45.6%	0. 0.0%	25. 43.9%	6. 10.5%
GROUP 4 NO COMMITMENT	46.	13. 28.3%	2. 4.3%	6. 13.0%	25. 54.3%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 67.70%

TABLE 27

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR PHYSICIAN'S ASSISTANTS

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	130.	114. 87.7%	7. 5.4%	7. 5.4%	2. 1.5%
GROUP 2 PASSIVE COMMIT	48.	17. 35.4%	27. 56.2%	1. 2.1%	3. 6.2%
GROUP 3 POTENTIAL COMMIT	31.	7. 22.6%	2. 6.5%	16. 51.6%	6. 19.4%
GROUP 4 NO COMMITMENT	32.	3. 9.4%	2. 6.3%	8. 25.0%	19. 59.4%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 73.03%

TABLE 28

DISCRIMINANT ON ALL MAJOR VARIABLES
PREDICTION FOR CORPSMEN

PREDICTION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP GP. 1	GP. 2	GP. 3	GP. 4
GROUP 1 ACTIVE COMMIT	319.	259. 81.2%	10. 3.1%	33. 10.3%	17. 5.3%
GROUP 2 PASSIVE COMMIT	86.	26. 30.2%	39. 45.3%	9. 10.5%	12. 14.0%
GROUP 3 POTENTIAL COMMIT	210.	24. 11.4%	0. 0.0%	147. 70.0%	39. 18.6%
GROUP 4 NO COMMITMENT	189.	10. 5.3%	6. 3.2%	49. 25.9%	124. 65.6%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 70.77%

APPENDIX B

SUPPLEMENTARY ANALYSIS

As an aside to the principal strategy of analysis, the various indices previously constructed were disaggregated into their component elements. Using the elements as variables, stepwise discriminant analyses using all of the elements of an index were performed for each role to determine if prediction results could be improved. It was also of interest to discover which of the component elements had the greatest significance for each of the six roles.

When compared with the results of the method first used, only marginal improvements were seen in that for certain of the roles, the overall percentage of correct classifications decreased by as much as three percent while in others, there was improvement of not more than five percent. Because of the degree of intercorrelation among the elements of an index (r ranging as high as .675 among Group performance elements) it is difficult to attach much confidence beyond the first variable to enter the stepwise procedure. Since discriminant analysis is essentially a process similar in many respects to multiple regression, the problems associated with multicollinearity become significant when correlations of this magnitude are encountered.

With that caveat in mind, the results of each index's analysis were examined to identify which was the most powerful element of the index. Table 29 gives the results for physicians, physician's assistants, and corpsmen. Table

30 gives the results for the three nurse roles. As can be seen, there is moderate overlap among the roles on which of the questionnaire items had greatest significance.

This process was not pursued at length since the principal focus of the research was the commitment categories and not a differential analysis of the roles. Through judicious selection of items in the data, however, subsequent analysis might profitably address this question since it would appear that there are concerns which are unique to the various roles.

TABLE 29

Stepwise Order of the Disaggregated Variables Entering the Discriminant Analysis

Variable	Step Entered		
	MD	PA	HM
Length of service category	1	1	1
Command interest in personnel welfare	2	-	-
Career-enhancing work assignment	3	4	-
Assigned work gives feelings of pride in self	8	9	2
Superiors receptive to ideas/suggestions	4	-	5
Adequacy of inter-unit communication	-	2	-
Command's work sensibly organized	-	7	3
Overall job satisfaction	-	-	7
Satisfaction with supervisors	-	-	-
Status satisfaction	-	6	-
Satisfaction with progress in military	6	8	-
Satisfaction with promotion opportunities	-	-	4
Preference for managerial opportunities	5	-	-
Need for independence in work	7	-	-
Desire to become technically outstanding	-	-	-
Preference for early retirement	9	3	6
Procedural formality in medical tasks	10	-	8
Degree of personal medical autonomy	-	-	-
Medical matters must be referred upward	-	10	9
Procedural formality in admin tasks	-	-	-
Degree of personal admin autonomy	-	5	-
Admin matters must be referred upward	-	-	10
Percentage Change in Classification Results	+5.1	+5.7	+0.1

TABLE 30

Stepwise Order of the Disaggregated Variables Entering the Discriminant Analysis

Variable	Step Entered		
	NS	N	NP
Length of service category	1	1	1
Command interest in personnel welfare	3	2	2
Career-enhancing work assignment	-	-	9
Assigned work gives feelings of pride in self	-	5	8
Superiors receptive to ideas/suggestions	-	7	5
Adequacy of inter-unit communication	-	-	-
Command's work sensibly organized	-	-	-
Overall job satisfaction	2	-	-
Satisfaction with supervisors	-	4	-
Status satisfaction	8	-	-
Satisfaction with progress in military	4	-	-
Satisfaction with promotion opportunities	-	-	3
Preference for managerial opportunities	7	3	-
Need for independence in work	-	6	-
Desire to become technically outstanding	-	-	4
Preference for early retirement	-	-	-
Procedural formality in medical tasks	6	-	10
Degree of personal medical autonomy	-	-	6
Medical matters must be referred upward	-	-	-
Procedural formality in admin tasks	5	-	-
Degree of personal admin autonomy	-	-	-
Admin matters must be referred upward	-	-	7
Percentage Change in Classification Results	-3.3	-3.3	+4.4

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APPENDIX C

RESEARCH QUESTIONNAIRE

NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA - 93940

IN REPLY REFER TO:
NC4(55Gi)/kld
27 January 1976

To: Questionnaire Recipient

This questionnaire is part of a Department of Defense study on effective utilization of all members of health care teams in the armed forces. Currently many types of professionals and paraprofessionals are engaged in health care, and we wish to identify the problems associated with fully utilizing the abilities and training of each person. We are not evaluating the relative worth of each profession, but rather determining what problems exist in using each profession most effectively. This study is integral to an overall effort to improve the quality of health care in the military with the limited resources available. Thus we would deeply appreciate your cooperation in completing the questionnaire. The study has the endorsement and cooperation of the Surgeon General of the Army, the Surgeon General of the Navy, and the Surgeon General of the Air Force as well as the office of the Secretary of Defense (M&RA).

Specific instructions on completing the questionnaire can be found on the inside cover. Note that we ask three basic kinds of questions: questions regarding your time allocation and specific tasks you may do, questions regarding your work setting and career plans, and some demographic questions (age, sex, etc.). We hope to differentiate the various medical roles in the military to identify some potential barriers to increased organizational effectiveness. The questionnaires are completely confidential, so please be completely honest in your responses. The individual identity of respondents will not be recorded. The identification number on each questionnaire enables us simply to identify your installation and for purposes of data analysis. We would appreciate your prompt completion of the questionnaire, at least within the next week if possible.

Thank you very much for your help.

Dr. William C. Giauque

Dr. William C. Giauque
Study Director

Instructions

The questionnaire is self-explanatory. Simply follow the instructions carefully. If there is any difficulty in interpreting questions, try to give the most reasonable answer possible. When you're through, put the entire questionnaire in the accompanying envelope and mail. It will probably take about 20-25 minutes to complete the questionnaire.

All responses will be kept strictly confidential. There is not record of which individuals participate in the study. Complete frankness will greatly enhance the value of the study.

Part I: Medical Role Description

For each of the following questions, please check the box or fill in the appropriate information which most accurately indicates your answer to the question.

6 1. What is your present primary role in the military health care system? (Please check only one box.)

- ☐ 1. Physician
- ☐ 2. Nursing Supervisor
- ☐ 3. Nurse
- ☐ 4. Physician Assistant
- ☐ 5. Nurse Practitioner/Nurse Clinician
- ☐ 6. MAMIC/AMOSIST
- ☐ 7. Corpsman
- ☐ 8. Other (specify) _____

7-10 2. How long have you been in your present position/role? ____years (7-8) ____months (9-10)
(For example: how long have you been a P.A.?)

11 3. Where are you currently working on this base? _____
(e.g., Emergency Room, OB-Gyn Clinic, Ambulatory Clinic, Dispensary, etc.)

12 4. In what medical specialty have you been trained? (Please check only one box).

- ☐ 1. OB-Gyn
- ☐ 2. Family Practice
- ☐ 3. Pediatrics
- ☐ 4. Surgery
- ☐ 5. Internal Medicine
- ☐ 6. Psychiatric
- ☐ 7. Chronic Illness
- ☐ 8. I have no medical specialty
- ☐ 9. Other (specify) _____

13 5. Does your present job involve you in providing direct medical care to patients?

☐ 1. No (if no, skip to Part II on page 3)

☐ 2. Yes (if yes, please answer the following questions)

14-16 6. What is the total number of patients you see on an average work shift? _____

17-19 7. What percentage of your time is spent in face-to-face contact with patients? _____%

8. In your present job, how much of your time is spent providing treatment to each of the following types of patients?	All of my time (95%-100%)	Not all, but a great deal (61%-94%)	A moderate amount of time (21%-60%)	A small, but significant amount of time (11%-20%)	Little or none of my time (0-10%)	
a. Active-duty personnel	1	2	3	4	5	20
b. Military dependents	1	2	3	4	5	21
c. Retired military personnel	1	2	3	4	5	22
d. Others (specify)_____	1	2	3	4	5	23

9. In your present job, how much of your time is spent dealing with the patients with each of the following medical needs?	All of my time (95%-100%)	Not all, but a great deal (61%-94%)	A moderate amount of time (21%-60%)	A small, but significant amount of time (11%-20%)	Little or none of my time (0-10%)	
a. Acute illness/injury	1	2	3	4	5	24
b. Chronic illness	1	2	3	4	5	25
c. Routine checkups	1	2	3	4	5	26

Part II: Medical Task Responsibilities

The following are 50 medical tasks which might be performed in an ambulatory care setting. We are interested in knowing which of these tasks you actually do perform in your role as a provider of medical care. For each task, indicate how often or frequently you perform that task in your present job.

Note : Read these answer choices over carefully.

Then answer each of the following questions by placing an X in the numbered box under the answer you want to give.

	Almost Never Perform	Infrequently/ Seldom Perform	Sometimes Perform	Frequently Perform	Quite Frequently Perform	
1. Measure and record height, weight, and blood pressure.	1	2	3	4	5	27
2. Record the results of laboratory studies.	1	2	3	4	5	28
3. Take and record complete medical history.	1	2	3	4	5	29
4. Take ECG.	1	2	3	4	5	30
5. Distinguish between normal and abnormal ECG.	1	2	3	4	5	31
6. Take throat cultures.	1	2	3	4	5	32
7. Evaluate and treat Strep throat according to protocal.	1	2	3	4	5	33
8. Perform complete general physical examination for new patients.	1	2	3	4	5	34
9. Perform physical examination with physician confirming heart & lung findings.	1	2	3	4	5	35
10. Collect venous blood samples.	1	2	3	4	5	36
11. Start intra venous fluids.	1	2	3	4	5	37
12. Collect clean catch urine.	1	2	3	4	5	38

	Almost Never Perform	Infrequently /Seldom Perform	Sometimes Perform	Frequently Perform	Quite Frequently Perform	
13. Change foley catheters in male patients.	1	2	3	4	5	59
14. Provide routine prenatal care.	1	2	3	4	5	60
15. Counsel patients on family planning.	1	2	3	4	5	61
16. Measure & record fetal heartbeat.	1	2	3	4	5	62
17. Palpate uterus for fetal position.	1	2	3	4	5	63
18. Pelvic exam for Cervical Dilatation.	1	2	3	4	5	64
19. Deliver baby following uncomplicated pregnancy.	1	2	3	4	5	65
20. Take pap smears.	1	2	3	4	5	66
21. Perform routine pelvic exams.	1	2	3	4	5	67
22 ..Teach breast self-examination to patients.	1	2	3	4	5	68
23. Perform cardio pulmonary resuscitation.	1	2	3	4	5	69
24. Percuss bladder for distension	1	2	3	4	5	70
25. Evaluate & treat diarrhea.	1	2	3	4	5	71
26. Evaluate & treat abdominal pain according to protocols.	1	2	3	4	5	72
27. Evaluate & treat chest pain according to protocols.	1	2	3	4	5	73
28. Perform rectal exam to evaluate prostate gland.	1	2	3	4	5	74
29. Perform sigmoidoscopy.	1	2	3	4	5	75
30. Evaluate & treat V.D. by protocol.	1	2	3	4	5	76
31. Manage patients with chronic disorders according to standing protocols.	1	2	3	4	5	77
32. Prescribe diabetic diets & adjust insulin dosage.	1	2	3	4	5	78
33. Adjust medication for patient with hypertension according to protocol.	1	2	3	4	5	79
34. Counsel patients with minor emotional disturbances.	1	2	3	4	5	80

	Almost Never Perform	Infrequently / Seldom Perform	Sometimes Perform	Frequently Perform	Quite Frequently Perform	
35. Diagnose & treat acute otitis media.	1	2	3	4	5	61
36. Diagnose & initiate treatment for otitis externa.	1	2	3	4	5	62
37. Examine ears with otoscope.	1	2	3	4	5	63
38. Dilate pupils.	1	2	3	4	5	64
39. Examine retina and optic discs.	1	2	3	4	5	65
40. Perform test of intra ocular pressure (tonometry).	1	2	3	4	5	66
41. Removal of foreign body from eye.	1	2	3	4	5	67
42. Perform visual acuity.	1	2	3	4	5	68
43. Suture a laceration.	1	2	3	4	5	69
44. Remove suture.	1	2	3	4	5	70
45. Incise & drain abscess.	1	2	3	4	5	71
46. Strap or tape ankle, wrist, or knee for immobilization.	1	2	3	4	5	72
47. Set an undisplaced fracture.	1	2	3	4	5	73
48. Set a displaced fracture.	1	2	3	4	5	74
49. Reduction of shoulder dislocation.	1	2	3	4	5	75
50. Aspirate joint fluid from knee.	1	2	3	4	5	76

			1
77	78	79	80

Part III: Work-related Attitudes and Descriptions

Part III (A)

The following questions seek to get your responses concerning several aspects of how you feel about the place in which you work and the people with whom you work. The first 7 questions ask about "people in your work group." By work group we mean people with whom you come into contact regularly concerning your day-to-day work activities. Please answer all questions in this section.

Note: Read these answer choices over carefully.

Then answer each of the following questions by placing an X in the numbered box under the answer you want to give.

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent	
1. To what extent do people in your work group maintain high standards of performance?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	6
2. How much do people in your work group encourage each other to give their best effort?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	7
3. To what extent do members of your work group offer each other help in solving job-related problems?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	8
4. To what extent do members of your work group take the responsibility for resolving disagreement and working out acceptable solutions?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	9
5. To what extent do you have confidence and trust in the members of your work group?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	10
6. To what extent do members of your work group provide the help you need so you can plan, organize, and schedule work ahead of time?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	11
7. In general, to what extent do members of your work group perform well under pressure or in emergency situations?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	12
8. To what extent are you told what you need to know to do your job in the best possible way?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	13

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent	
9. To what extent do you feel that workload and time factors are adequately considered in planning your work group assignments?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	14
10. To what extent are those above you receptive to your ideas and suggestions?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	15
11. To what extent is the amount of information you get about what is going on in other departments adequate to meet your needs?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	16
12. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	17
13. To what extent are work activities sensibly organized in this command?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	18
14. To what extent does this command have a real interest in the welfare and morale of assigned personnel?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	19
15. To what extent do you regard your present position of duties in this organization as enhancing your career?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	20
16. To what extent do you feel you have been adequately trained to perform your assigned tasks?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	21
17. To what extent does your assigned work give you pride and feelings of self-worth?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	22

	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Fairly Satisfied	Very Satisfied	
18. All in all, how satisfied are you with your present job (overall satisfaction)?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	23

Part III (B)

The following questions concern your views on how things are done around here, especially rules and procedures. Please indicate to what extent are each of the following statements true or false in this facility.

Note : Read these answer choices over carefully. Then for each statement, place an X in the numbered box under the answer which most accurately expresses your reaction to the statement.

	Definitely false	More false than true	More true than false	Definitely true	
1. Whatever situation arises, we have procedures to follow in dealing with it.					
a. concerning medical tasks	☐	☐	☐	☐	24
b. concerning administrative tasks	☐	☐	☐	☐	25
2. Going through the proper channel is constantly stressed.					
a. concerning medical tasks	☐	☐	☐	☐	26
b. concerning administrative tasks	☐	☐	☐	☐	27
3. We are to follow strict operating procedures at all times.					
a. concerning medical tasks	☐	☐	☐	☐	28
b. concerning administrative tasks	☐	☐	☐	☐	29
4. There can be little action taken here until a supervisor approves a decision.					
a. concerning medical tasks	☐	☐	☐	☐	30
b. concerning administrative tasks	☐	☐	☐	☐	31
5. A person who wants to make his/her own decisions would be quickly discouraged here.					
a. concerning medical tasks	☐	☐	☐	☐	32
b. concerning administrative tasks	☐	☐	☐	☐	33
6. Generally, even small matters have to be referred to someone higher up for a final answer.					
a. concerning medical tasks	☐	☐	☐	☐	34
b. concerning administrative tasks	☐	☐	☐	☐	35

	Definitely false	More false than true	More true than false	Definitely true	
7. Generally, I have to ask my supervisor before I do almost anything.					
a. concerning medical tasks	1	2	3	4	36
b. concerning administrative tasks	1	2	3	4	37
8. Generally, any decision I make has to have my supervisor's approval.					
a. concerning medical tasks	1	2	3	4	38
b. concerning administrative tasks	1	2	3	4	39

Part III(C)

The following questions are concerned with your views of how power and influence is distributed amongst the different groups who work in this facility.

Note: Read these answer choices over carefully.

Then answer each of the following questions by placing an X in the numbered box under the answer you want to give.

	Little or no influence	Some	Quite a bit	A great deal	A very great deal of influence	Do not know/ not applicable	
1. In general, how much say or influence do you personally have on what goes on in your unit?							
a. concerning medical tasks	1	2	3	4	5	6	40
b. concerning administrative tasks	1	2	3	4	5	6	41
In general, how much say or influence does each of the following people or groups of people have on what goes on in your unit? If any group is not present in your unit or is unfamiliar to you, check box number 6, marked, "Do not know/not applicable."							
2. Physicians							
a. concerning medical tasks	1	2	3	4	5	6	42
b. concerning administrative tasks	1	2	3	4	5	6	43

	Little or no influence	Some	Quite a bit	A great deal	A very great deal of influence	Do not know/ not applicable	
3. Nursing Supervisors							
a. concerning medical tasks	1	2	3	4	5	6	44
b. concerning administrative tasks . . .	1	2	3	4	5	6	45
4. Nurses							
a. concerning medical tasks	1	2	3	4	5	6	46
b. concerning administrative tasks . .	1	2	3	4	5	6	47
5. Nurse Practitioners/Nurse Clinicians							
a. concerning medical tasks	1	2	3	4	5	6	48
b. concerning administrative tasks . .	1	2	3	4	5	6	49
6. Physician Assistants							
a. concerning medical tasks	1	2	3	4	5	6	50
b. concerning administrative tasks . .	1	2	3	4	5	6	51
7. NAMICs/AMOSISTS							
a. concerning medical tasks	1	2	3	4	5	6	52
b. concerning administrative tasks . .	1	2	3	4	5	6	53
8. Chief Corpsmen/Senior Corpsmen							
a. concerning medical tasks	1	2	3	4	5	6	54
b. concerning administrative tasks . .	1	2	3	4	5	6	55
9. Corpsmen							
a. concerning medical tasks	1	2	3	4	5	6	56
b. concerning administrative tasks . .	1	2	3	4	5	6	57
10. Administrators (MSC)							
a. concerning medical tasks	1	2	3	4	5	6	58
b. concerning administrative tasks . .	1	2	3	4	5	6	59
11. Others (specify)							
a. concerning medical tasks	1	2	3	4	5	6	60
b. concerning administrative tasks . .	1	2	3	4	5	6	61

Part III (D)

Below are listed a number of types of health-care personnel who might work in an ambulatory care facility. Please indicate how valuable you feel each role's contribution is to the mission of providing quality medical care to this facility's patients. For any role listed which you feel you do not have sufficient information to form an opinion, check the box marked, "Do not know/no opinion."

Note: Read these answer choices over carefully.

Then answer each of the following questions by placing an X in the numbered box under the answer you want to give.

	Very valuable/ perform essential tasks	Valuable/ essential in some cases	Helpful but seldom perform essential tasks	Of secondary value/ sometimes helpful	Definitely not needed	Do not know/ no opinion	
a. Physicians	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	62
b. Nurses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	63
c. Chronic Illness Nurses/ Extended Nurses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	64
d. Nurse Practitioners/Nurse Clinicians	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	65
e. Physician Assistants	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	66
f. NAMICs/AMOSISTS	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	67
g. Corpsmen	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	68

Part III (E)

The following questions ask about your satisfaction with various aspects of your job and military career.

Note : Read these answer choices over carefully.

Then for each statement, place an X in the numbered box under the answer which most accurately expresses your reaction to the statement.

	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor dissatisfied	Fairly Satisfied	Very Satisfied	
1. All in all, how satisfied are you with your supervisor(s) in your present job?	1	2	3	4	5	69
2. All in all, how satisfied are you with present level of status your job has?	1	2	3	4	5	70
3. All in all, how satisfied are you with your salary in your present job?	1	2	3	4	5	71
4. All in all, how satisfied are you with the work itself which your present job involves?	1	2	3	4	5	72
5. All in all, how satisfied are you with the educational/training opportunities available in your present job?	1	2	3	4	5	73
6. All in all, how satisfied are you with the amount of autonomy/independence you have in your present job?	1	2	3	4	5	74
7. All in all, how satisfied are you with the progress you have made in the military up to now?	1	2	3	4	5	75
8. How satisfied do you feel with your chances for getting ahead in the military in the future?	1	2	3	4	5	76

77 78 79 80

Part IV Career Orientation

The following seven questions ask about your major career values.

Note: Read these answer choices over carefully.

Then answer each of the following questions by placing an X in the numbered box under the answer you want to give.

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent	
1. To what extent do you prefer a career which allows you to work independently (as opposed to working with others)?	1	2	3	4	5	6
2. To what extent do you prefer a career which allows you time for outside-the-organization activities (eg, for family, for self)?	1	2	3	4	5	7
3. To what extent do you want to become technically outstanding in your field?	1	2	3	4	5	8
4. To what extent do you prefer a career which provides opportunities to become an administrator/manager?	1	2	3	4	5	9
5. To what extent do you prefer a career which provides early retirement and allows you to establish a second career?	1	2	3	4	5	10
6. To what extent are you concerned with job security?	1	2	3	4	5	11
7. To what extent do you require a career in which you can be creative and innovative?	1	2	3	4	5	12

Part V: Personal Information

The following few questions are concerned with personal data and information about your military career.

13-14 1. What is your age? _____ years

15 2. What is your sex?

☐ 1. Female ☐ 2. Male

16 3. What is your present military rank?

☐ 1. E1 - E3 ☐ 5. O1 - O3
☐ 2. E4 - E6 ☐ 6. O4 - O6
☐ 3. E7 - E9 ☐ 7. O7 - O9
☐ 4. W1 - W4

17-20 4. How long have you been in the military?

_____ (17-18) years _____ (19-20) months

21 5. Which branch of the military are you in?

☐ 1. Army ☐ 5. Coast Guard
☐ 2. Navy ☐ 6. Non-Military, Civilian
☐ 3. Air Force ☐ 7. Other (specify) _____
☐ 4. Marines

22-25 6. How long have you worked in military health services?

_____ (22-23) years _____ (24-25) months

26-27 7. Right now, how much longer do you expect to stay in the military?

_____ (26-27) years

☐☐☐ 3
78 79 80

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